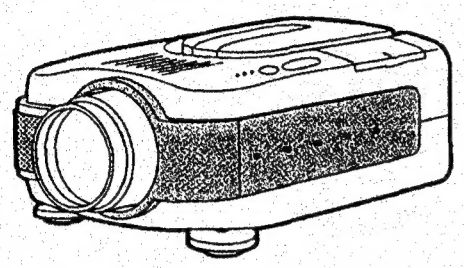
SHARP SERVICE MANUAL SERVICE-ANLEITUNG

S92J3XV310P//



SECAM/PAL/NTSC SYSTEM
LCD PROJECTOR
LCD PROJEKTOR

MODEL MODELL XV-310P

In the interrests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used

Im Interesse der Benutzer-Sicherheit (in einigen Lander durch Sicherheitzvorschriften gefordert) sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.

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SHARP CORPORATION

SPECIFICATIONS

System :	PAL/SECAM/NTSC3.58/NTSC4.43 SYSTEM
Projection image size (diagonal):	76 cm (30 inch) at a distance of approx. 1m 152 cm (60 inch) at a distance of approx. 2 m
LCD panels:	9.1 cm (3.6") Twin-TFT Active Matrix panel
No. of pixels:	RGB Trio 100,386 pixels (234(V) x429(H))
Lens:	F2.8 f = 123 mm
Contrast ratio:	100:1
Horizontal resolution:	PAL:More than 320 lines, NTSC: More than 350 lines
Operating temperature:	5°C ~ 40°C
Storage temperature:	- 20°C ~ 55°C
Power Source:	AC 220 ~ 240V, 50/60Hz
Audio output:	3W (Monoural)
Speaker:	8 cm (Round Speaker)
Power consumption:	175w
Dimensions (W x H x D):	215 mm x 149 mm x 385 mm
Weight:	4.3 kg (9.51 lbs)
Accessories:	Lens Cover: 1 pc. Air Filter: 1 pc. (installed) 21-pin RCA conversion adapter: 1 pc.(In some ares, this adapter is not supplied with the unit.)

Specifications are subject to change without notice.

TECHNISCHE DATEN

System :	PAL/SECAM/NTSC3.58/NTSC4.43-System
Projektionsbildgröße (diagonal):	76 cm (30Zoll) bei einem Abstand von ca. 1 m 152 cm (60 Zoll) bei einem Abstand von ca. 2 m
LCD-Projektionsplatten:	9,1 cm (3,6Zoll) Twin-TFT Aktivmatrixplatten
Anzahl der Punkte:	RGB-torio 100.386 Bilpunkut (234(V) x429(H))
Objectiv:	F2,8 f = 123 mm
Kontrastverhältnis:	100:1
Horizontale Auflösung:	PAL: Mehr aks 320 Zeilen, NTSC: mehr als 350 Zeilen
Betriebstemperatur:	5°C ~ 40°C
Laget-temperatur:	- 20°C ~ 55°C
Stromversorgung:	Wechselstrom 220 ~ 240V, 50/60Hz
Tonausgangsleistung:	3W (monoural)
Lautsprecher:	8 cm (Rundlautsprecher)
Nennaufnahme:	175w
Abmessungen (B x H x T):	215 mm x 149 mm x 385 mm
Gewicht:	4,3 kg
Zubehör:	Objektivkappe1 Stück Luftfilter: 1 Stuck (installiert) 21-pol. RCA-Konvrsionadaptor: 1 Stück (In einigen Gebieten wird der Rca-Konversinadapter nicht mit der Gerät mitgeliefert.)

Änderrungen der technische Daten vorbehalten.

NOTE TO SERVICE PERSONNEL

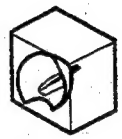
UV-RADIATION PRECAUTION

The light source, metal halide lamp, in the LCD projector emits small amounts of UV-Radiation.

AVOID DIRECT EYE AND SKIN EXPOSURE.

To ensure safety please adhere to the following:

1. Be sure to wear sun-glasses when servicing the projector with the lamp turned "on" and the top enclosure removed.



2. Do not operate the lamp outside of the lamp housing.

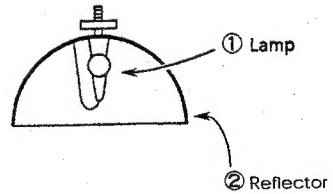
3. Do not operate for more than 2 hours with the enclosure removed.

UV-Radiation and Medium Pressure Lamp Precautions

1. Be sure to disconnect the AC plug when replacing the lamp.
2. Allow one hour for the unit to cool down before servicing.
3. Replace only with same type lamp. Type **MSFR120S12H** rated 80V/120W.
4. The lamp emits small amounts of UV-Radiation, avoid direct-eye contact.
5. The medium pressure lamp involves a risk of explosion. Be sure to follow installation instructions described below and handle the lamp with care.

■ Lamp Replacement

Note:
Since the lamp reaches a very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off. (to allow the lamp to cool off.)
Installing the new lamp, make sure not to touch the lamp (bulb) replace the lamp by holding its reflector ②.
[Use original replacement only.]



DANGER! — Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages at its start.

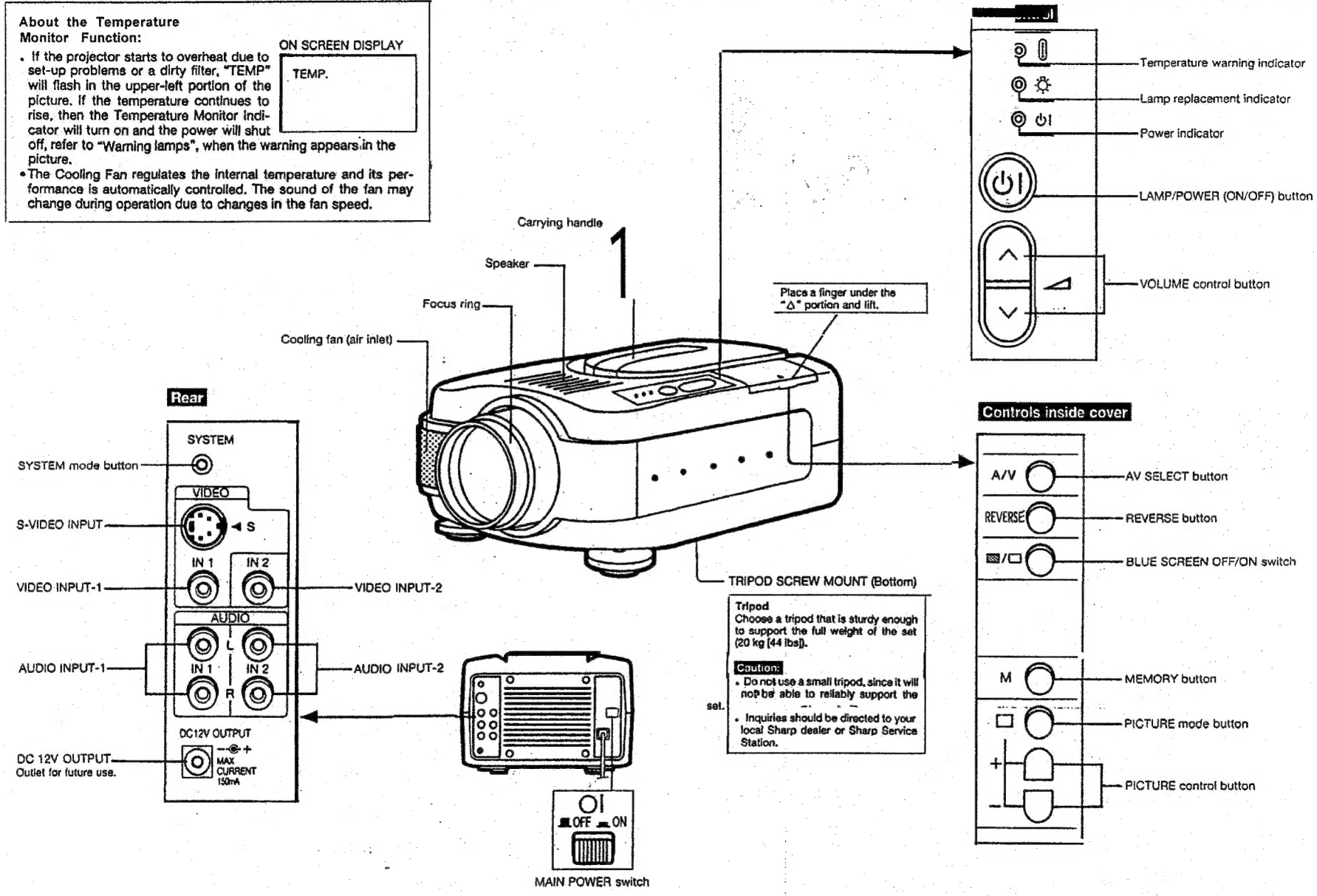
Location of Controls

About the Temperature Monitor Function:

- If the projector starts to overheat due to set-up problems or a dirty filter, "TEMP" will flash in the upper-left portion of the picture. If the temperature continues to rise, then the Temperature Monitor indicator will turn on and the power will shut off, refer to "Warning lamps", when the warning appears in the picture.
- The Cooling Fan regulates the internal temperature and its performance is automatically controlled. The sound of the fan may change during operation due to changes in the fan speed.

ON SCREEN DISPLAY

TEMP.



Tripod
Choose a tripod that is sturdy enough to support the full weight of the set (20 kg [44 lbs]).

Caution:

- Do not use a small tripod, since it will not be able to reliably support the set.
- Inquiries should be directed to your local Sharp dealer or Sharp Service Station.

Setting Up the Projector

Installation precautions

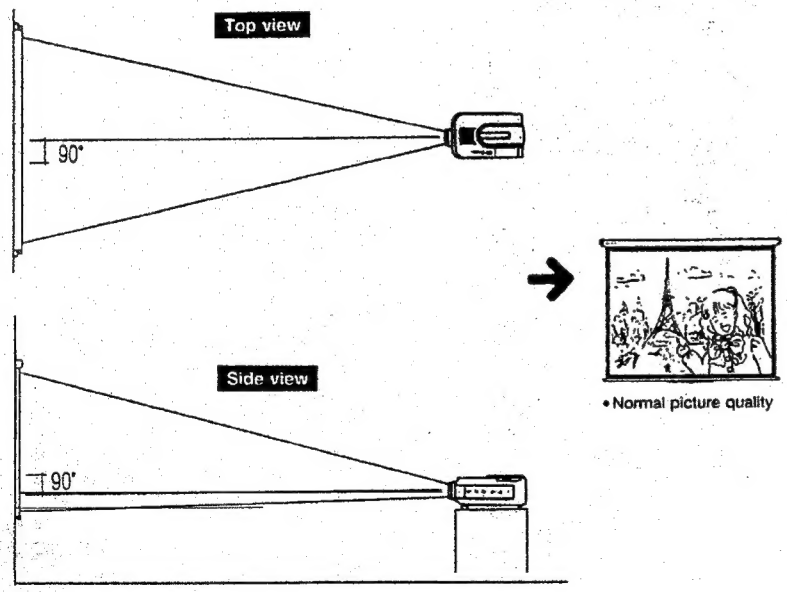
Do not place the projector in excessively humid or dusty locations or in location exposed to soot or cigarette smoke. If the lens, mirror or other optical component become dirty, the picture will blur or darken, making viewing difficult.

- Do not expose the projector to extreme heat or cold.
  Operating temperature: 5°C~40°C
  Storage temperature: –20°C~55°C

Example of a standard setup

■ Position the screen so that it is not in direct sunlight or room light. Light falling directly onto the screen turns the screen white and makes viewing difficult. Close the curtains when using the screen in a bright room.

■ Place the projector at a 90° angle to the screen to achieve optimum viewing quality.



If the screen and projector are not properly positioned with respect to one another, the picture may become distorted and difficult to view.

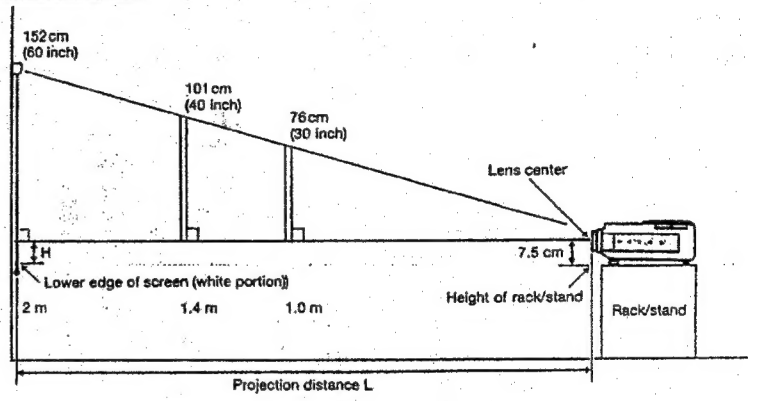
■ The zoom lens makes it possible to freely adjust the image to the screen size within the range of the lens.

■ The projection distance of the lens is 1 m~4 m. The distance between the projector and the screen should be within this range.

Relation between projection distance and screen size

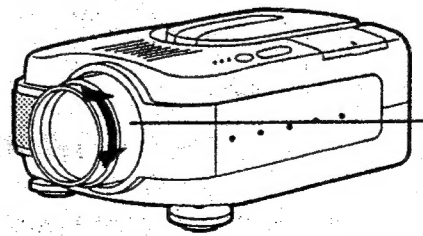
Screen size (diagonal)	Projection distance L	Distance from lens center to lower edge of screen (H)
152 cm (60 inch)	2.0 m	23 cm
101 cm (40 inch)	1.4 m	16 cm
76 cm (30 inch)	1.0 m	12 cm

Height of projector



■ After positioning the projector, adjust the focus as shown.

Focusing



■ Focus the lens so that the screen image is as sharp as possible.

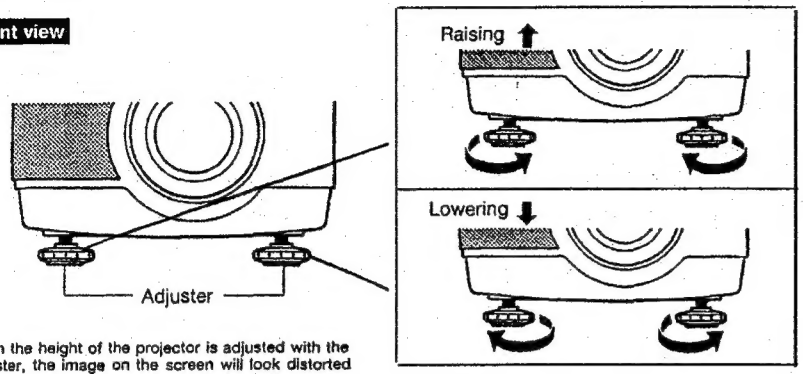
Turn the focus ring to focus the image.

Setting Up the Projector

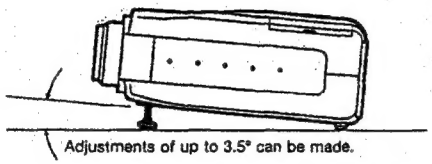
Levelling and height adjustments

■ Use the adjuster at the bottom of the projector to adjust the height of the projector.

Front view

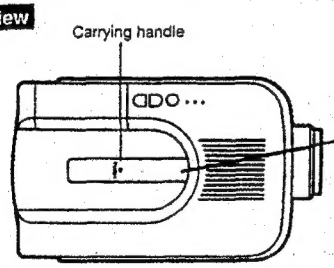


When the height of the projector is adjusted with the adjuster, the image on the screen will look distorted since the projector is not at right angles to the screen.

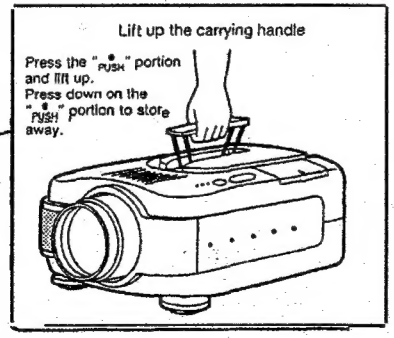


■ Use the carrying handle when moving the projector.

Top view



When moving the projector, replace the lens cap to protect the lens.



Connecting the Projector

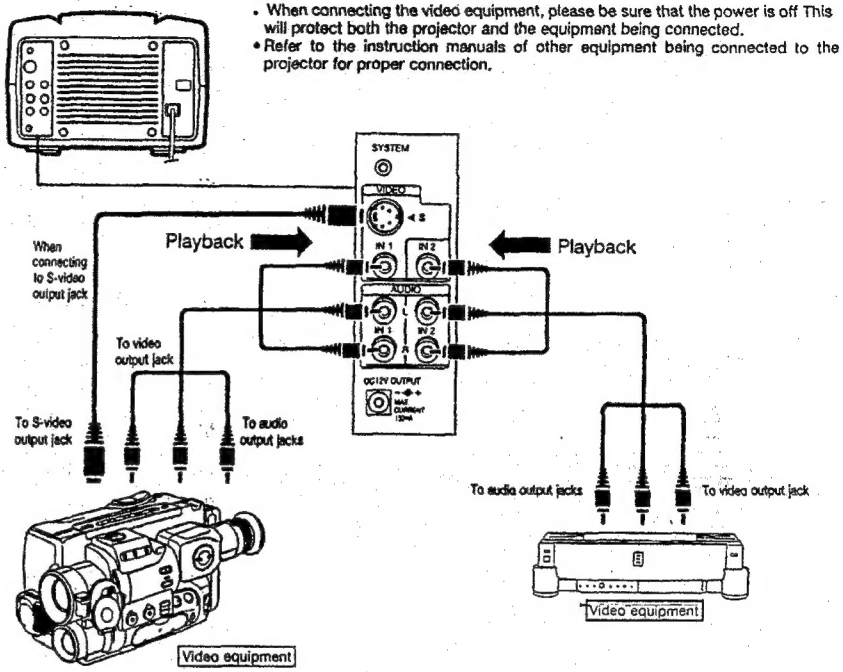
SYSTEM 1

To connect the projector to video equipment for viewing played-back images.

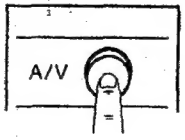
Rear

Notes:

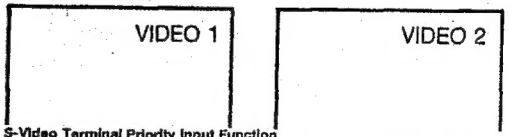
- When connecting the video equipment, please be sure that the power is off This will protect both the projector and the equipment being connected.
- Refer to the instruction manuals of other equipment being connected to the projector for proper connection.



Use the A/V SELECT button to select either VIDEO 1 or VIDEO 2.



On Screen Display



S-Video Terminal Priority Input Function

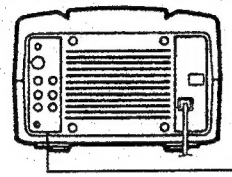
The Video Input 1 and S-video input terminals on this projector are set up to give priority to input from the S-video terminal.

- When video equipment is connected to both terminals, the video image from the S-video input terminal is shown on the screen.
- To view video input from video equipment connected to the Video Input 1 terminal, disconnect the plug from the S-video terminal.

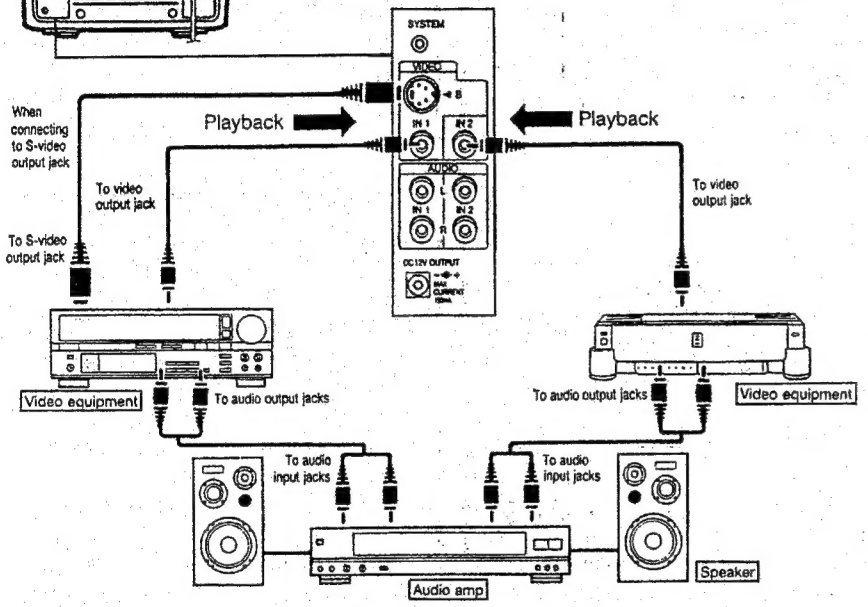
SYSTEM 2

To connect the projector to video and audio equipment for viewing played-back images. (With an audio amplifier connection.)

Rear Terminals



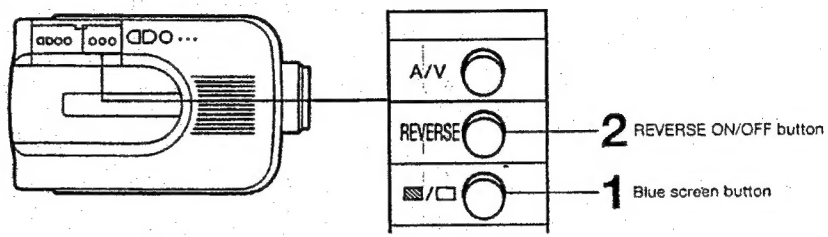
- When connecting equipment with an S-video output, such as an S-VHS VCR, and one or more video decks to an AV amplifier, connect up both the S-VIDEO terminal and the VIDEO-2 JACK on the projector.
- Use the the VIDEO SELECT button to select either S-VIDEO INPUT to watch played-back images from equipment connected to the S-VIDEO terminal, or VIDEO INPUT 2 to watch played-back images from equipment connected to the VIDEO-2 terminal.



Other Functions

- When the BLUE SCREEN function is turned ON, the screen will turn blue when there is no video signal input to the projector.
- Press the BLUE SCREEN button once more to turn the BLUE SCREEN function OFF.

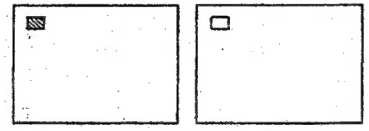
Controls inside cover



1 Blue screen function

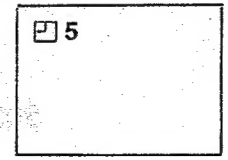
- When the Blue Screen button is set to ▨/□ (ON/OFF), the following display is shown for a few seconds on your screen.

Screen display



(ON) (OFF)

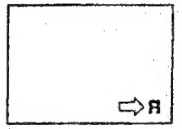
- When the BLUE SCREEN button is set to the ▨ (ON) position, the screen turns blue when no signal or noise is input. (If the Blue Screen function is engaged for over 15 minutes, the AUTO OFF function engages and power is automatically turned off. Five minutes before the power turns off, the remaining time (in minutes) is displayed at one-minute intervals in the top left of the screen.)



2 Reversing the image

- When the REVERSE ON/OFF button is set to REVERSE mode, the following display is shown for a few seconds on your screen.

Screen display

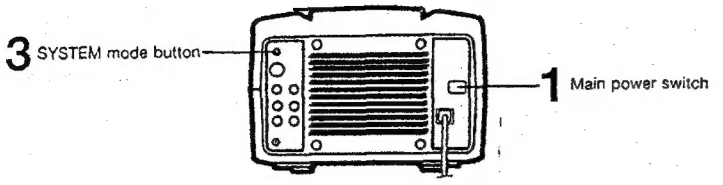


(ON)

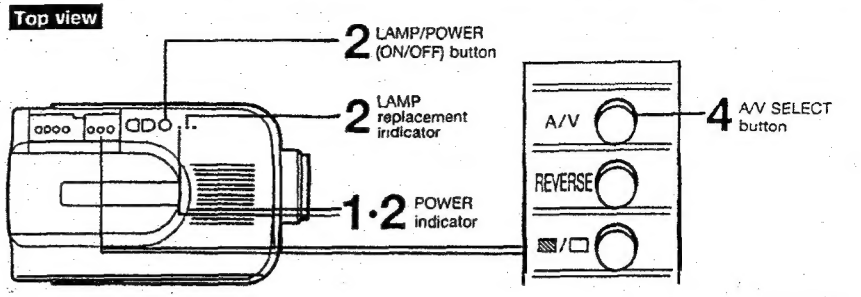
- When a mirror or reverse image is required for an application such as rear projection, the REVERSE image switch can be used. Press the reverse image button. The image on the screen will flip to a mirror image of the input video signal. Press the button again and the image will return to its normal appearance.

Using the Projector

Rear view



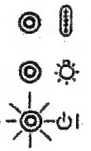
Top view



1 Turning on the main power switch

Set the Main Power switch to ON.

When you are using the projector for the first time or when the power indicator lamp is off, set the main power switch to ON. (Indicator lights red.)
The power indicator lamp turns off when the main power switch is set to off.



Indicator off:
Main Power switch is set to OFF
Indicator lights red:
Standby status
Indicator lights green:
Projector lamp on

2 Turning on the lamp power

Press LAMP/POWER (ON/OFF) button

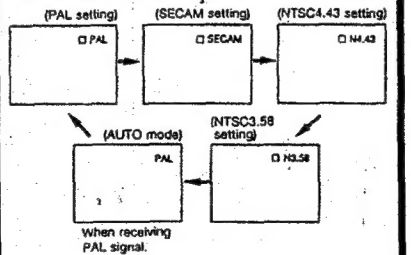
Green: Lamp on
Flashing green light: Lamp is being warmed up
Red: Lamp should be replaced
See page "Warning lamps" for details.

The indicator turns green.

3 System change

Press SYSTEM mode button.

- When the button is pressed, the select COLOR system is displayed in the top right corner of the screen for about a few seconds.



- In Auto mode, "PAL", "SECAM", "NTSC4.43" or "NTSC3.58" is displayed on the screen for about a few seconds when modes are automatically changed.

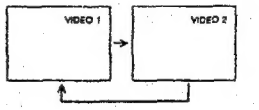
4 A/V Select

Press the A/V SELECT button.

- **A/V button on the projector operator panel**
  The indication is cycled as shown below when the button is pressed.

VIDEO 1 ⟶ VIDEO 2

The screen display changes as shown in these figures.



Notes:

- Even when the power is turned off using the POWER button, the COOLING FAN will continue to operate as long as the projector's internal temperature remains high (about 90 seconds). Do not disconnect the AC power cord plug while the COOLING FAN is operating.
- If the projector is turned on immediately after it has been turned off, it may take a short while before the lamp is turned on. (During this period the Lamp Monitor indicator flashes green.)

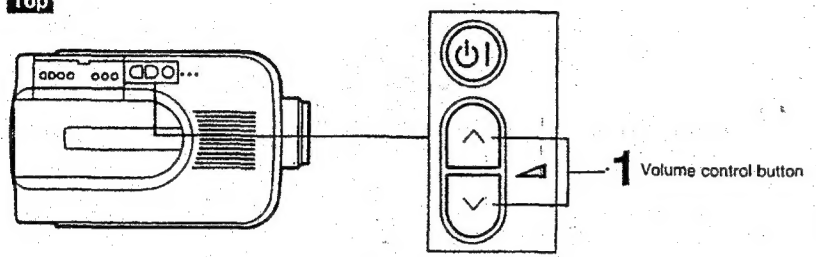
Notes:

- This projector is equipped with three video input systems: S-video, Video-1, and Video-2.
- To choose between these systems, press the A/V button to select input from either the VIDEO-1 (S-VIDEO given priority) or the VIDEO-2 terminals.

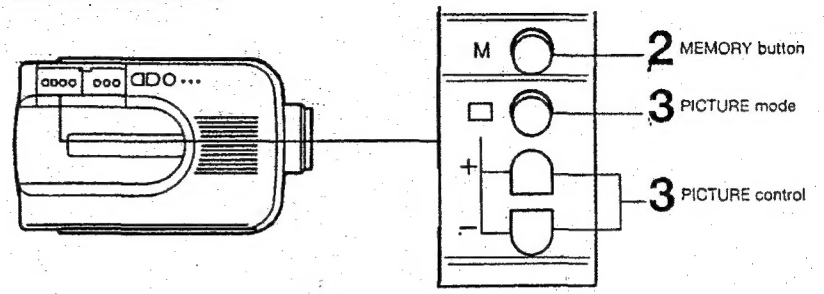
Picture and Volume Control

- This projector's picture is set to standard specifications at the factory. However, you can adjust it to suit your own preferences using the VIDEO ADJUST buttons.
- The positions of the picture settings are committed to memory when set.

Top

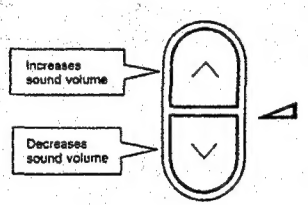


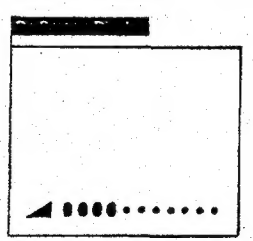
Controls inside cover



1 Adjusting the Volume

Press the Volume control button.





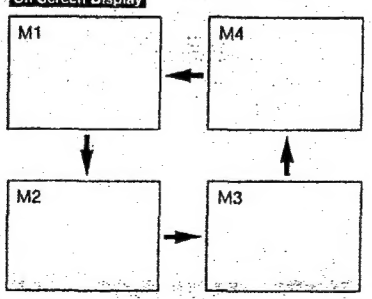
The number of segments (0-16) displayed increase or decrease as the volume is raised or lowered.

2 Selecting the MEMORY

Press the MEMORY button.

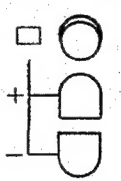
- When the MEMORY button is pressed, the present settings will be displayed on the screen for about a few seconds.

On Screen Display

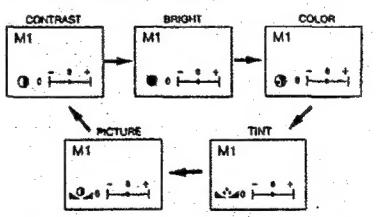


3 Picture adjustments

Use the PICTURE MODE and PICTURE CONTROL buttons to set the picture to suite your preferences.



The picture modes change as shown below when the Picture mode button is pressed.
(M1 shows a memory number.)



- Select the mode that is to be adjusted and use the PICTURE control buttons to make the adjustments.
  - The modes are displayed on the screen for about a few seconds. The adjustments have to be made while the screen is displayed.

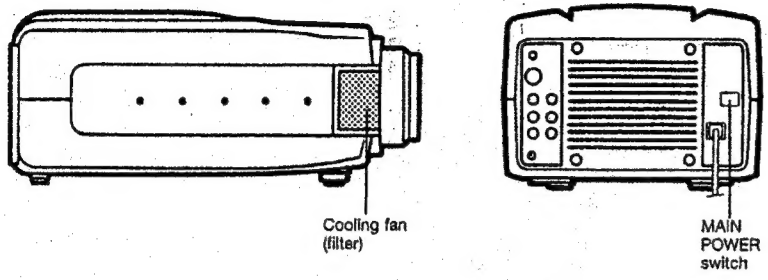
Tint setting can only be adjusted when receiving NTSC signal.

Maintenance

Air filter cleaning

■ The air filter should be cleaned about every 100 hours. Clean the filter more often when the projector is used in a dusty location.

• Have your dealer replace the filter when it is no longer possible to clean it.

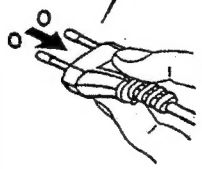


1 Turning off the main power

Turning off the power with the main power switch.

2 Unplugging the power cord

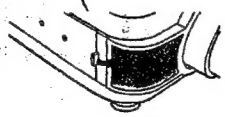
Unplug the power cord.



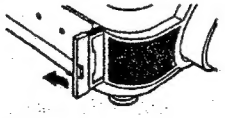
In some areas, the plug may not resemble the one shown in the illustration.

3 Remove the air filter.

To remove the air filter first grasp the protruding tab and move it in the direction of the arrow.

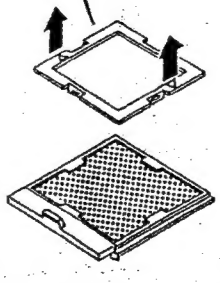


Then, pull the filter straight out, as indicated by the arrow.



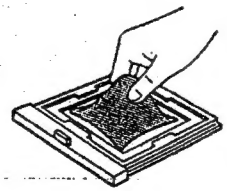
4 Remove the filter holder

Pull the filter holder's "△"-marked portion in the direction of the arrow to unhook the filter holder.



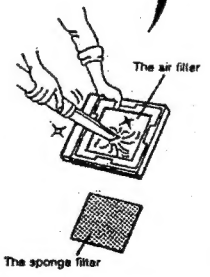
5 Remove the sponge filter.

Remove the sponge filter by grasping.



6 Clean the air filter.

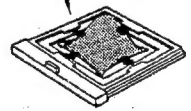
Clean the dust off the air filter and the sponge filter with a vacuum cleaner.



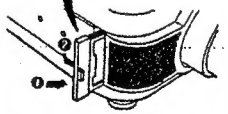
If the filter is very dirty, wash it with a neutral detergent dissolved in cool or lukewarm water, then leave the filter in the sun to dry.

7 Replace the air filter.

Replace the sponge filter in the air filter as before.



Rettach the air filter.



Align the ridges on the top and bottom of the air filters with the grooves in the projector body, and slide in.

Lamp

■ The projector's lamp has a limited operating life.

When the lamp is nearly burned out, the picture and colour quality deteriorate. In this event, have the lamp replaced by qualified service personnel.

Replacing the projector lamp requires special technical expertise and should be performed by your local Sharp dealer or Sharp Service Station.

Warning lamps

■ This projector is equipped with warning indicators that go on when an abnormal condition occurs.
■ There are two warning indicators in the projector: the temperature warning lamp and lamp replacement indicator.
■ If the projector malfunctions, the temperature warning lamp or the lamp replacement indicator will light red and the power is turned off. Perform the following procedures when you have turned off the main power switch.

Warning lamp	Symptom	Potential problems	Countermeasures
Temperature	The temperature inside is too high.	• The air vents are blocked.	• Install the projector in an appropriate location.
		• The air filter is clogged.	• Clean the filter.
		• The cooling fan is defective. • Any of the internal circuits are defective.	• Turn in the projector for service.
Projector lamp	The projector lamp does not light.	• The projector lamp has reached the end of its life. • The projector lamp circuit is defective.	• Turn in the projector for service.

NOTE:
If the temperature warning lamp lights up red and the power cuts off, the projector will enter stand-by mode.
After turning off the projector, be sure to wait until the unit's internal temperature has sufficiently lowered before turning it on again (at least 5 min.).

Before Calling for Service

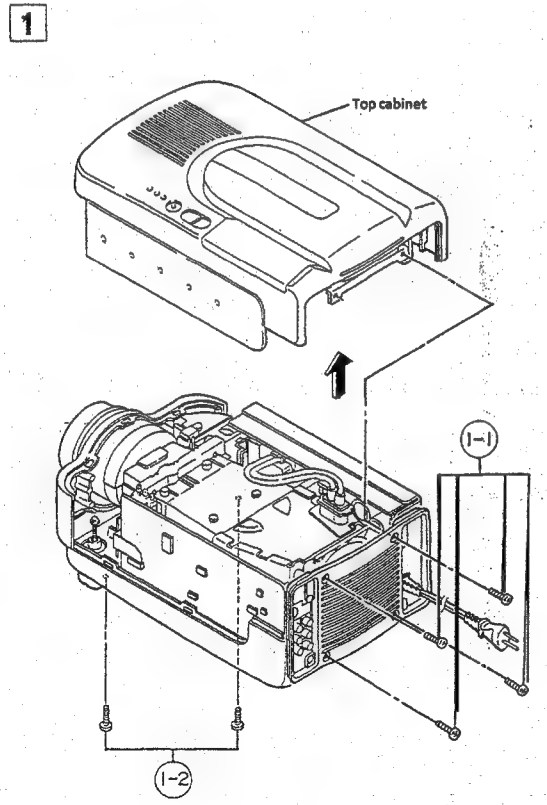
No picture	• The projector is not plugged into the mains supply. • The MAIN POWER switch is set to off. • The BRIGHT (–) control is set to the minimum position.
Colour is poor or faded	• Check that the COLOUR (+) and (–) controls are properly adjusted.
Picture is blurred	• Adjust the focus • The projection distance is too long or short to allow for proper focus.
An unusual sound is occasionally heard from cabinet	• If picture is normal, the sound is due to cabinet shrinkage caused by temperature changes. This will not effect operation.
Maintenance indicator lights up	• Refer to "Warning lamps".
No sound	• Check if the volume control is turned all the way down • Check to make sure that the wires at the back of the LCD projector are properly connected.

REMOVING THE MAJOR PARTS

1. Removing the rear panel

I-I. Unscrew the six screws off the rear panel and take out the rear panel.
1-2. Unscrew the two screws off the bottom of the unit.

Precautions on Handling the Cabinet
when removing and attaching the top cabinet, take the following precautions. The cable that connects the speakers on the inside of the top cabinet with the main PWB is short. Do not pull up the top cabinet too far, because otherwise the cable connector may be damaged. Slowly lift the top cabinet a -little, disconnect the speaker cable from the "SP" connector on the main PWB, and take out the top cabinet completely. To place the top cabinet back in position, first reconnect the speaker cable to the "SP" connector on the main PWB, and then fit the top cabinet to the bottom cabinet. In this fitting, keep the flexible cable, which runs between the LCD panel and the main PWB, inside the top cabinet. This cable might be caught between the top and bottom cabinets.

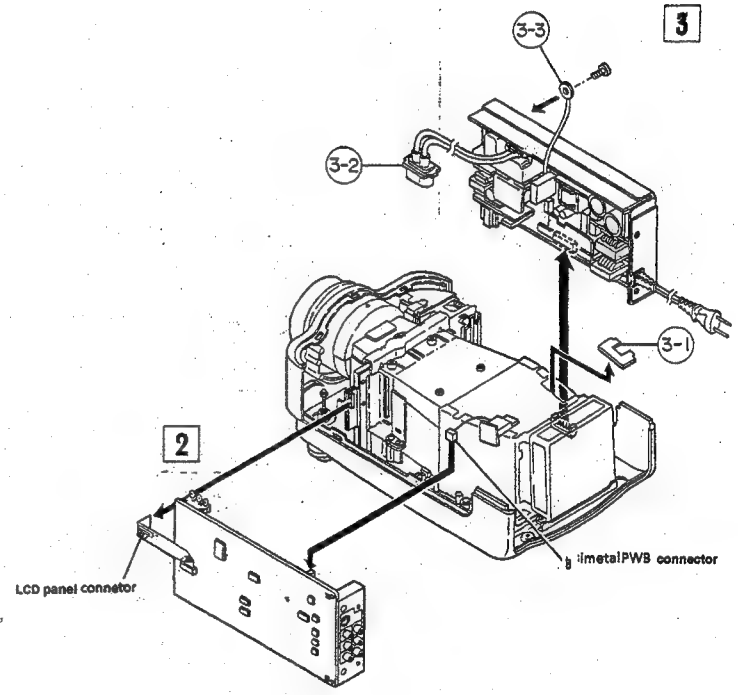


2. Removing the PWB

Disconnect the LCD panel connector and the bimetal PWB connector.

3. Removing the lamp ballast and power PWB unit

3-1. Untwist the lamp guide catch and take out the light shielding plate.
3-2. Untwist the lamp guide bracket catch and detach the bracket.
3-3. Unscrew the screw to disconnect the grounding lug terminal. Now take out the lamp ballast and the power unit.



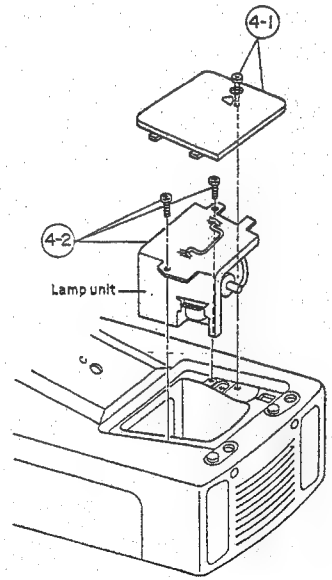
4. Removing the lamp unit

4-1. Unscrew the screw to detach the bottom cover.
4-2. Unscrew the two screws off the lamp unit. Take the lamp unit out.

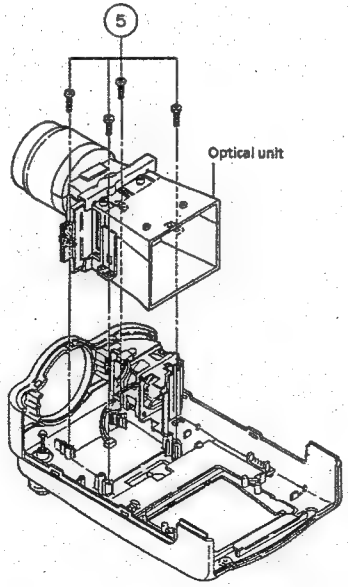
5. Removing the optical unit

Unscrew the four screws off the optical unit and take the optical unit out.

4



5



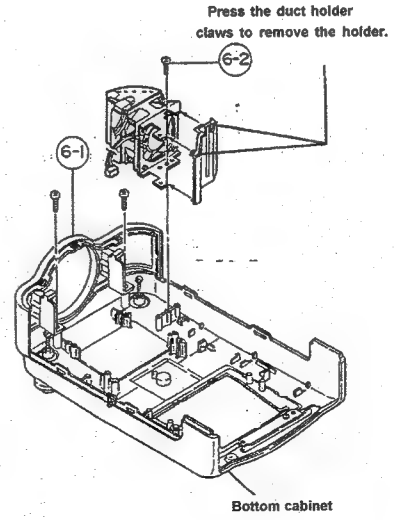
6. Removing the fan

6-I. Unscrew the two screws to take out the front cover of the unit.
6-2. Keep the fort claws pressed and release the duct holder. Then unscrew the screw to take out the fan unit.

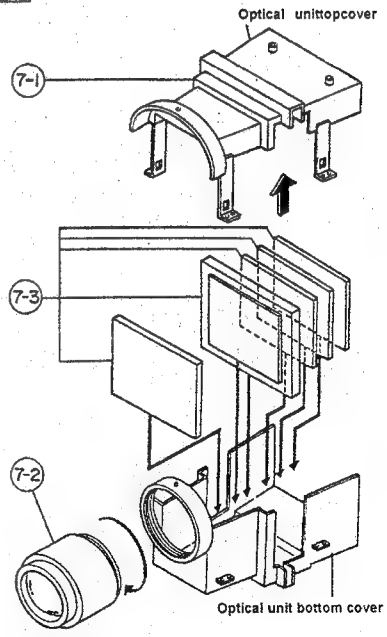
7. Disassembling and reassembling the optical unit

7-1. Pull up the optical unit top cover.
7-2. Turn the projection lens clockwise and remove the lens.
7-3. Pull up the following optical unit parts: **Fresnel** lens, light-in deflection plate, LCD panel, light-out deflection plate, condenser lens and U/V cut filter.

6

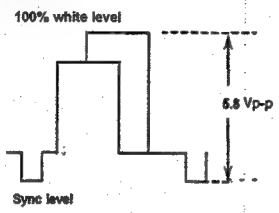
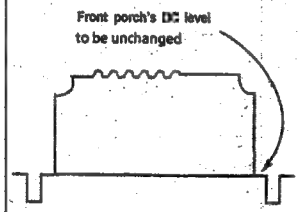


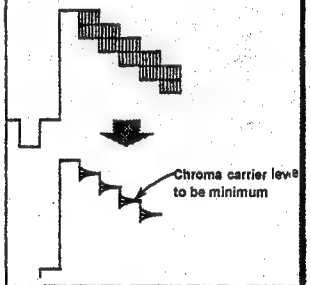
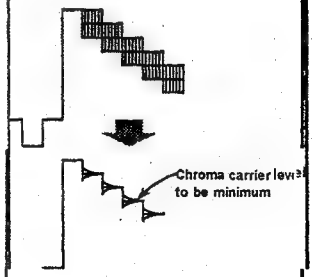
7

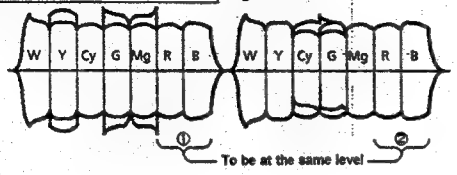
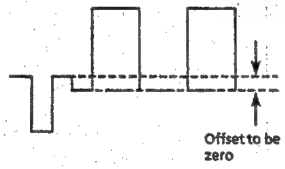
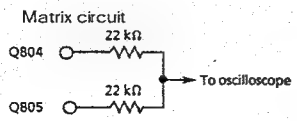
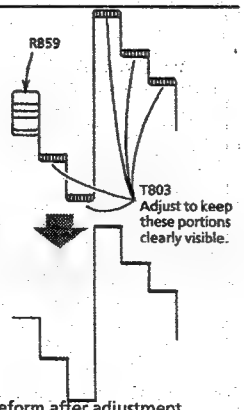


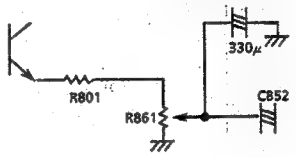
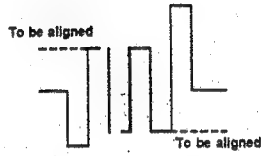
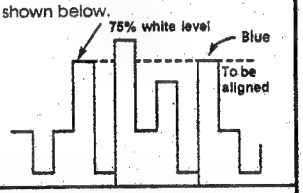
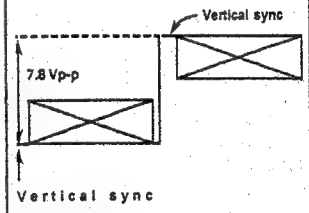
ELECTRICAL ADJUSTMENT

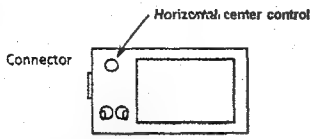
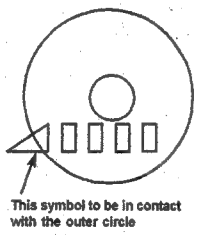
Note: Unless otherwise specified, all the adjustments should be made in the standard conditions.

	Adjustment position	Adjustment condition	Adjustment method
1	AGC (Automatic Gain Control): RI 546	• Receive the NTSC monoscope pattern signal. • Connect the voltmeter between TP1501 and GND.	Adjust RI 546 so that the voltmeter should read 3.0 ± 0.05V.
2	Y level: R861	• Receive the NTSC colour bar signal. • Apply 5 V to TP1604 to turn off the gamma correction. • Connect the oscilloscope between TP1602 and GND. • Turn on the gamma correction. If the signal is out of sync or the white portion is degraded, turn RI 604 to restore the original state.	Adjust R861 so that the difference between the sync level and the 100% white level be 5.8 ± 0.1 Vp-p. 
3	Sub-brightness: R2139	• Receive the NTSC monoscope pattern signal. • Connect the oscilloscope between TP1602 (G output) and GND. • Apply 5 V to TP2001 via a 6.8-kohm resistor.	Keep TP1604 under 5 V load and then under no load. Repeat this several times. Adjust R2139 so that the DC level at the front porch be unchanged whether TP1604 is under load or not. 
4	Sub-bias:R1604 (Green),	• Receive the NTSC colour bar signal. • Connect the oscilloscope between TP1602 and GND.	Turn RI 604 so that the peak of the sync signal be at -5.5 ± 0.5 V.
5	Sub-bias:R1602 (Red)	• Receive the NTSC colour bar signal. • Connect the oscilloscope between TP1601 and GND.	Turn RI602 so that the DC level at TP1601 be the same as that at TP1602. DC level at TP1602 ± 0.1V

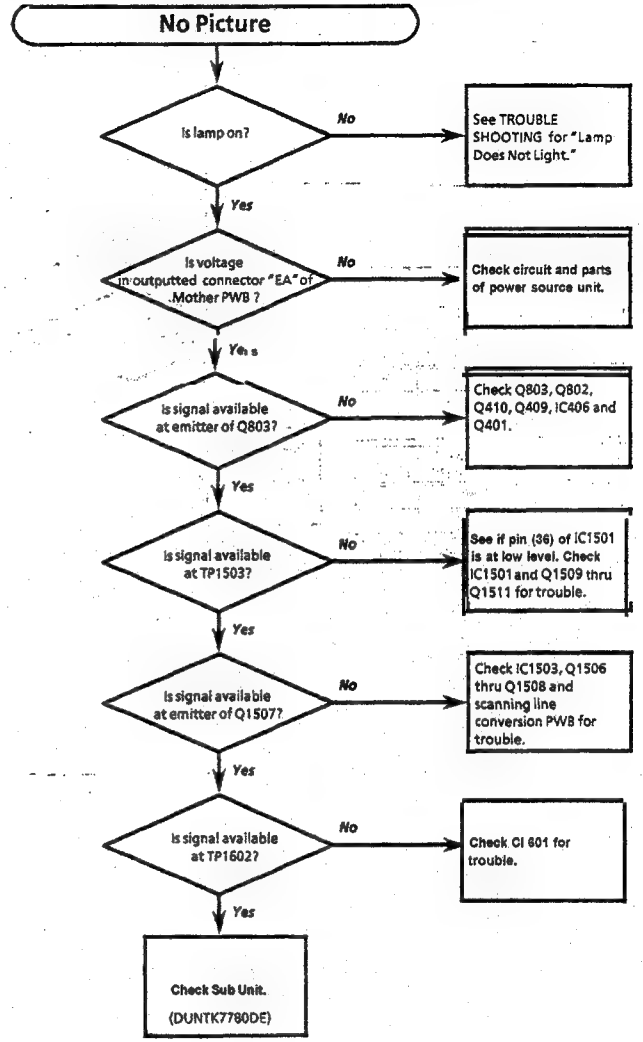
	Adjustment position	Adjustment condition	Adjustment method
6	Sub-bias: RI 608 (Blue)	• Receive the NTSC colour bar signal. • Connect the oscilloscope between TP1603 and GND.	Turn RI608 so that the DC level at TP1603 be the same as that at TP1602. DC level at TP1602 ± 0.1 V
7	White balance: RI 629 (B output)	• Receive the NTSC monoscope pattern signal. • Connect the oscilloscope's CH1 to TP1602. • Connect the oscilloscope's CH2 to TP1603 (B output) and invert the waveform.	Observe the CH1 and CH2 waveforms in the ADD mode. Adjust RI629 so that the amplitude be minimum.
8	White balance: RI 623 (R output)	• Receive the NTSC monoscope pattern signal. • Connect the oscilloscope's CH1 to TP1602. • Connect the oscilloscope's CH2 to TP1601(R output) and invert the waveform.	Observe the CH1 and CH2 waveforms in the ADD mode. Adjust RI623 so that the amplitude be minimum.
9	Chroma trap: T402	• Receive the PAL colour bar signal. • Connect the oscilloscope between TP401 and GND.	Turn T402 so that the chroma carrier level be minimum. 
10	Chroma trap: T401	• Receive the SECAM colour bar signal. • Connect the oscilloscope between TP401 and GND.	Turn T401 so that the chroma carrier level be minimum. 

	Adjustment position	Adjustment condition	Adjustment method
11	**SECAM level filter: T805**	• Receive the SECAM colour bar signal. • Connect the oscilloscope between TP806 and GND.	Turn T805 so that the R/B portions (1) and (2) in the two channels be the same in amplitude. See the figure below. 
12	**SECAM B-Y: T802**	• Receive the SECAM colour bar signal. • Connect the oscilloscope between TP803 and GND. • Turn T802 so that the offset be zero. See the figure at right.	
13	**SECAM R-Y: T801**	• Receive the SECAM colour bar signal. • Connect the oscilloscope between TP804 and GND. • Turn T801 so that the offset be zero. See the figure at right.	
14	**SECAM ID: T804**	• Receive the SECAM colour bar signal. • Connect the oscilloscope between TP805 and GND.	Turn T804 obtain the highest DC level.
15	**PAL 1H delay phase: T803** **PAL 1H delay amplifier: R859**	• Receive the PAL colour bar (E12 channel) signal. • Connect 2.2-kohm resistors to the emitters of Q804 and Q805. Now hook up the oscilloscope between the middle point and GND. See the figure below. 	

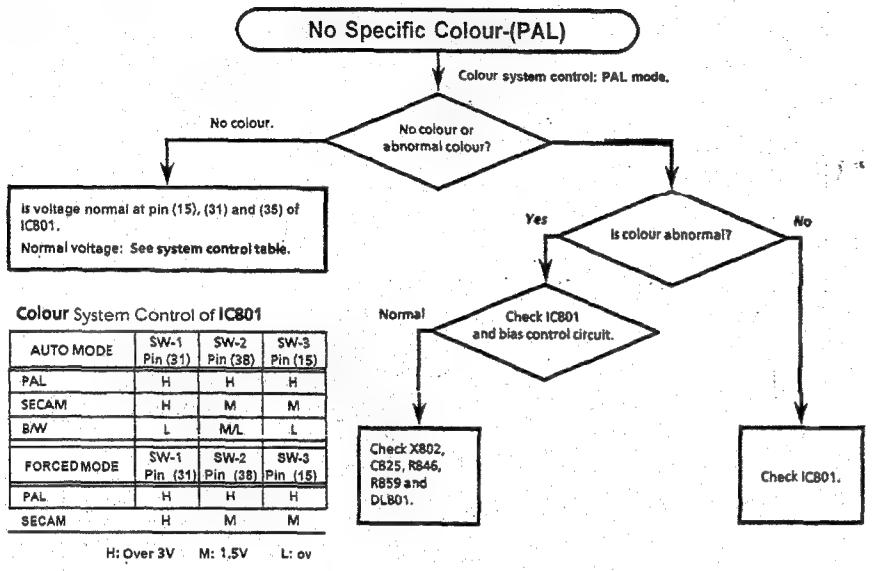
	Adjustment position	Adjustment condition	Adjustment method
16	**NTSC tint: R860**	• Receive the NTSC colour bar signal. • Turn the user colour and contrast controls by 10 steps toward the red tint (-10 points). Connect a 330-μF capacitor, as shown below, to drop the Y level. 	Turn R860 to obtain the waveform shown below. 
17	**Colour saturation: R858 (su b-colour)**	• Receive the NTSC colour bar signal. • Connect the oscilloscope between TP803 and GND. • Set the colour and contrast controls to + 7 points.	Turn R858 to obtain the waveform shown below. 
18	**Sub-bias (RGB): R1434**	• Receive the monoscope pattern signal. • Connect the oscilloscope between TP1405 (G output) and GND.	Turn RI434 so that the vertical sync level difference between two black portions at TP1405 be 7.8 ± 0.1 VP-P. 
19	**Common bias: R520**	• Make this adjustment in a dark room using the following tools and instruments. • Receive the NTSC monoscope pattern signal.	Adjust R520 so that the tone contrast be maximum.
20	**Sub-bias (red): RI602** **Sub-bias (blue): R1608**	• Receive the NTSC monoscope pattern signal.	Turn RI602 and R1608 until the best white balance can be achieved.

	Adjustment position	Adjustment condition	Adjustment method
21	NTSC horizontal center	• Receive the NTSC monoscope pattern signal. 	Turn the control on the panel (see the figure at left) to make the image at the center of the screen.
22	Scanning line conversion phase: RI119	• Receive the PAL monoscope pattern signal.	Adjust R1119 so that the image should come at the center of the screen.
23	Oscillation frequency: L1001	• Ground pin (70) of IC1001. • Connect the frequency counter between TP1001 and GND.	Turn L1001 so that the oscillation frequency be 15.625 ± 0.01 kHz.
24	Oscillation frequency: L1002	• Ground pin (43) of IC1001. • Connect the frequency counter between TP1002 and GND.	Adjust L1002 so that the oscillation frequency be 15.625 ± 0.01 kHz.
25	Sign position: T2001	• Display the sign on the screen. • Adjust T2001 to position the sign on the screen. • Receive the NTSC monoscope pattern signal. • Press the VOL button. 	
26	Audio output: R2062	• Connect the voltmeter between the center terminal of R2062 and GND.	Turn up the VOL button from minimum to the fourth step (where the second sign becomes reddish). Adjust R2062 so that the voltmeter should read 0.8 ± 0.02 V.

TROUBLE SHOOTING TABLE



TROUBLE SHOOTING TABLE (Continued)

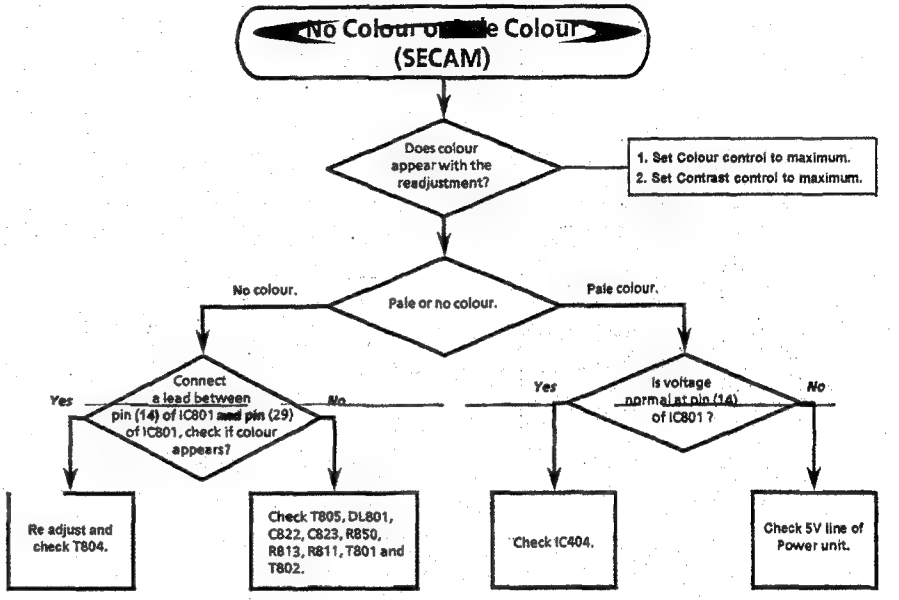


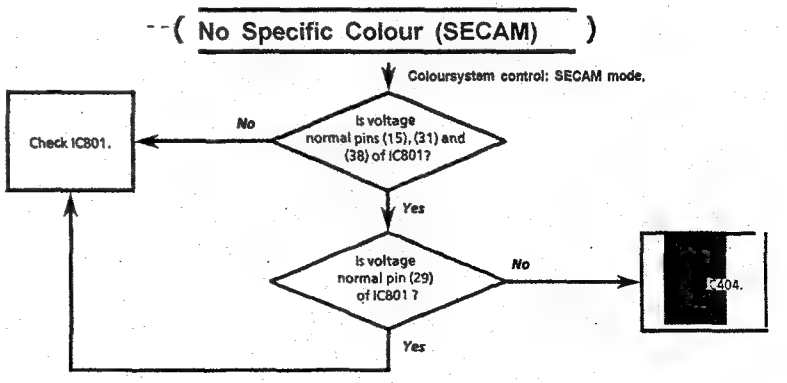
Colour System Control of **IC801**

AUTO MODE	SW-1 Pin (31)	SW-2 Pin (38)	SW-3 Pin (15)
PAL	H	H	H
SECAM	H	M	M
B/W	L	M/L	L
FORCED MODE	SW-1 Pin (31)	SW-2 Pin (38)	SW-3 Pin (15)
PAL	H	H	H
SECAM	H	M	M

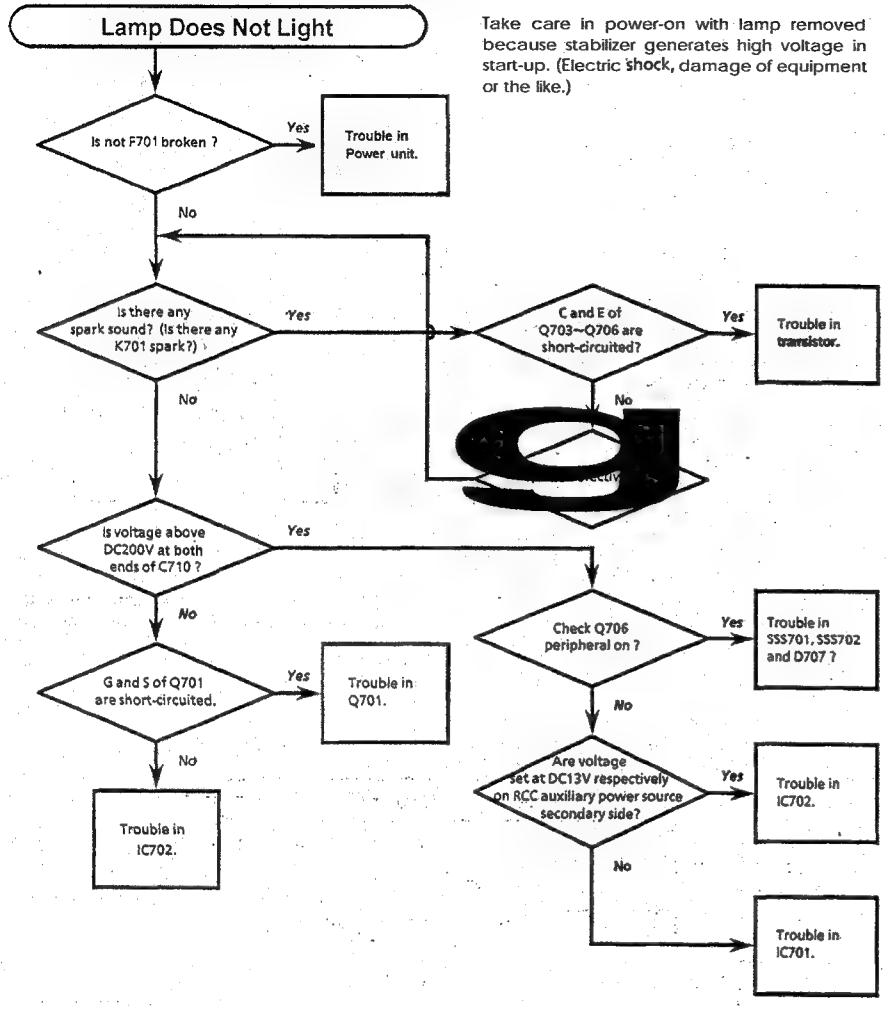
H: Over 3V M: 1.5V L: ov

TROUBLE SHOOTING TABLE (Continued)

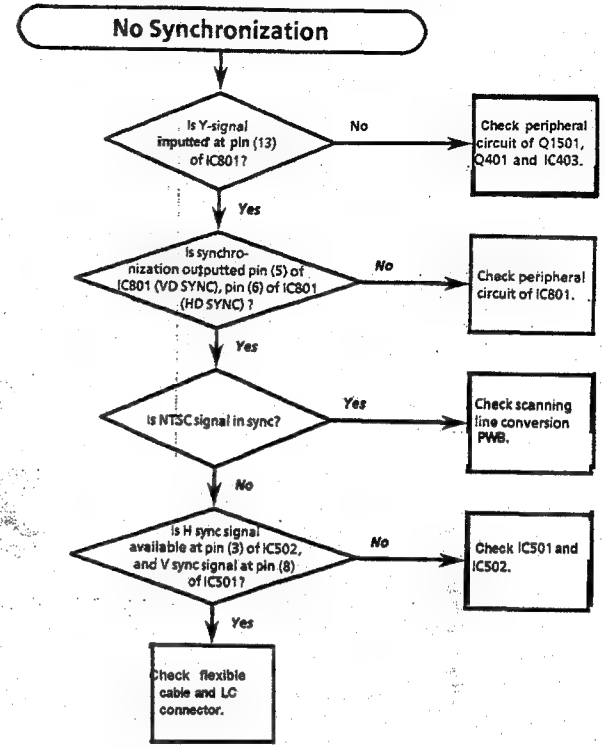




TROUBLE SHOOTING TABLE (Continued)



TROUBLE SHOOTING TABLE (Continued)



HINWEISE FÜR DEN WARTUNGSTEHNIKER

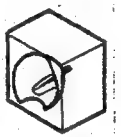
VORSICHTSMASSNAHMEN GEGEN UV-STRAHLUNG

Die Lichtquelle (Metallhalogenidlampe) im LCD-Projektor erzeugt geringe Anteile von UV-Strahlung.

DIREKTEN AUGEN- UND HAUTKONTAKT VERMEDIEN.

Folgende Sicherheitshinweise sind zu befolgen:

1. Bei der Wartung des Geräts muß bei eingeschalteter Lampe eine Sonnenschutzbrille getragen werdne. Der obere Deckel ist bei der Wartung zu enyfernen.



2. Die Lampe darf nicht außerhalb des Lampengehäuses verwendet werden.

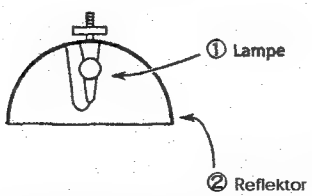
3. Bei entferntem oberen Deckel nicht länger als 2 Stunden betreiben.

Vorsichtsmaßnahmen bezüglich UV-Strahlung und Mitteldrucklampen

1. Vor dem Auswechseln der Lampe unbedingt den Netzstecker ziehen.
2. Das Gerät vor dem Durchführen von Wartungsarbeiten eine Stunde abkühlen lassen.
3. Nur gegen eine Lampe der gleichen Sorte auswechseln. Sorte MSFR120S12H, 80 V / 120 W.
4. Da die Lampe eine geringe UV-Strahlung aufweist, sollte direkter Blickkontakt vermieden werden.
5. Die Mitteldrucklampe weist ein Explosionsrisiko auf. Die nachstehenden Einbauanweisungen beachten und die Lampe vorsichtig handhaben.

■ Auswechseln der Lampe

Hinweis:
Da die Lampe während des Betriebs extrem heiß wird, sollt das Auswechseln erst eine Stunde nach dem Ausschalten stattfinden (abkühlzeit).
Beim Anbringen der neuen Lampe die Birne unbedingt nicht berühen. Den Reflektor ② der Lampe beim Auswechseln halten.
[Nur das Original-Ersatzteil verwenden.]



GEFAHR! — Niemals die Spannungsversorgung ohne Lampe einschalten, um elektrische Schläge und Schäden des Gerätes zu vermeiden, da der Stabilisator beim Einschalten hohe Spannungen erzeugt.

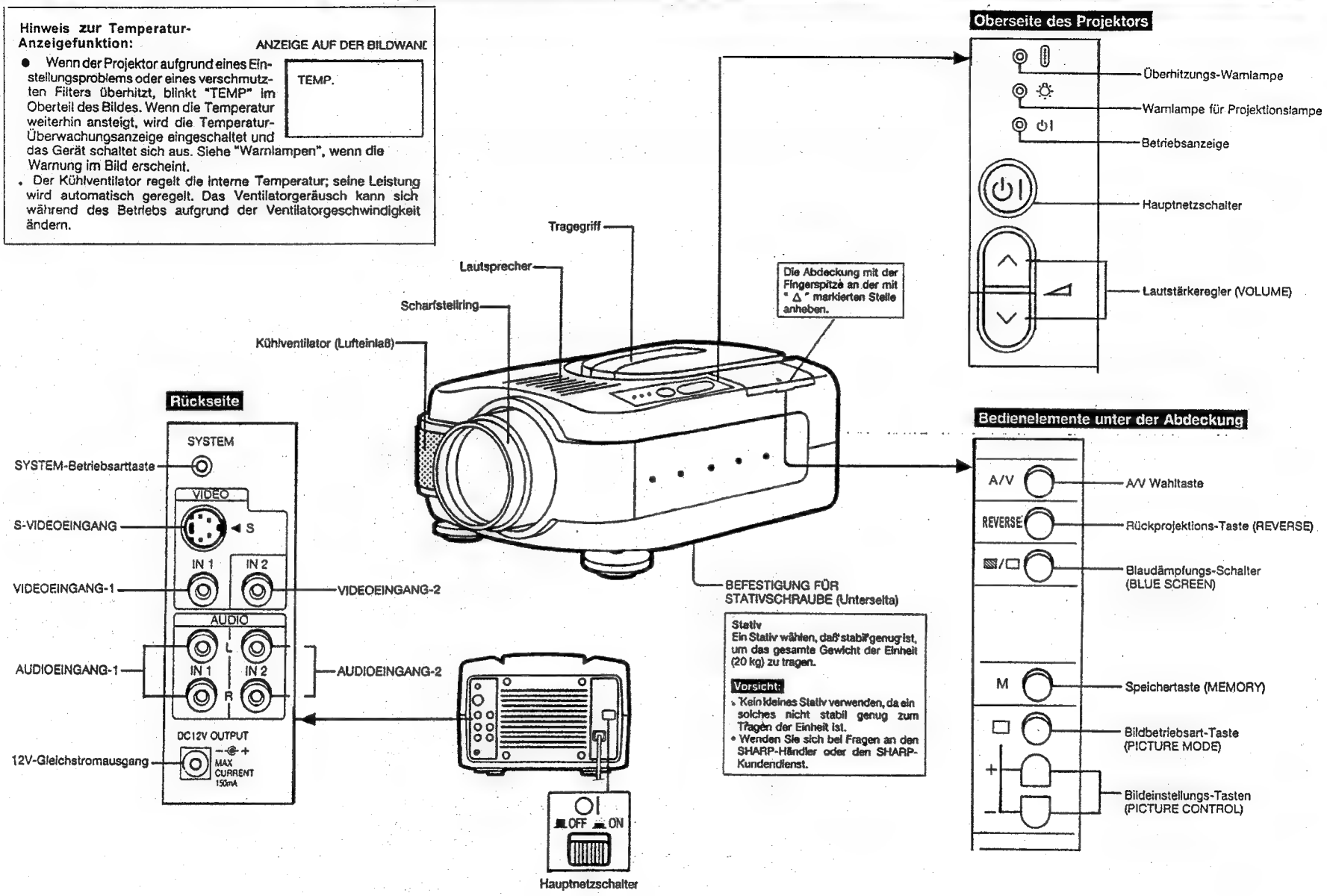
Lage der Bedienelemente

Hinweis zur Temperatur-Anzeigefunktion:

ANZEIGE AUF DER BILDWAND

TEMP.

- Wenn der Projektor aufgrund eines Einstellungsproblems oder eines verschmutzten Filters überhitzt, blinkt "TEMP" im Oberteil des Bildes. Wenn die Temperatur weiterhin ansteigt, wird die Temperatur-Überwachungsanzeige eingeschaltet und das Gerät schaltet sich aus. Siehe "Warnlampen", wenn die Warnung im Bild erscheint.
- Der Kühlventilator regelt die interne Temperatur; seine Leistung wird automatisch geregelt. Das Ventilatorgeräusch kann sich während des Betriebs aufgrund der Ventilatorgeschwindigkeit ändern.



Aufbau des Projektors

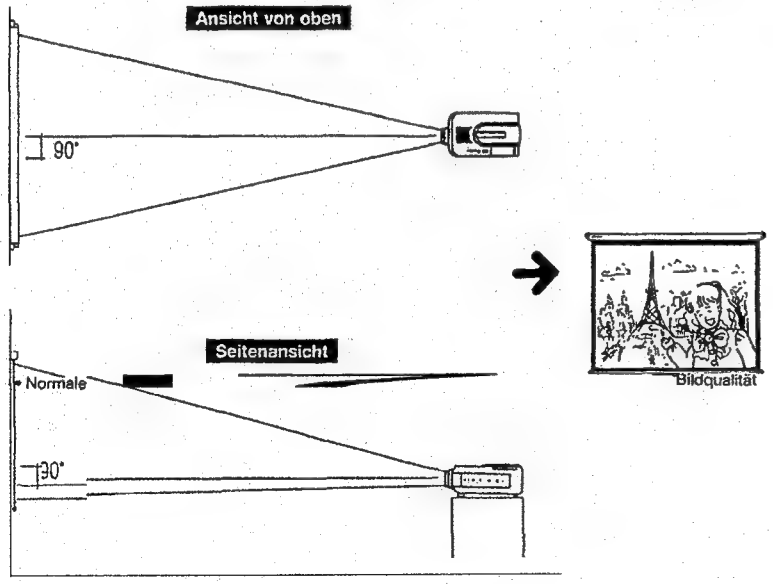
Vorsichtsmaßnahmen bei der Installation

Den Projektor nicht an Orten mit hoher Luftfeuchtigkeit oder mit viel Staub aufstellen. Orte vermeiden, an denen er Zigarettenrauch und Ruß ausgesetzt ist. Wenn das Objektiv, der Spiegel oder andere optische Bauteile verschmutzt sind, kann das Bild verschwommen oder dunkel sein und das Betrachten erschweren.

- Den Projektor nicht übermäßiger Hitze oder Kälte aussetzen.
  Betriebstemperatur: 5°C~40°C
  Lagertemperatur: −20°C~55°C

Beispiel für die Aufstellung

- Die Bildwand so aufstellen, daß sie nicht direktem Sonnenlicht oder der Zimmerbeleuchtung ausgesetzt ist. Direkt auf die Bildwand fallendes Licht macht die Bildwand weiß und erschwert das Betrachten. Die Vorhänge schließen, wenn die Bildwand in einem hellen Raum verwendet wird.
- Den Projektor mit einem Winkel von 90° zur Bildwand aufstellen, um eine optimale Bildqualität zu erzielen.



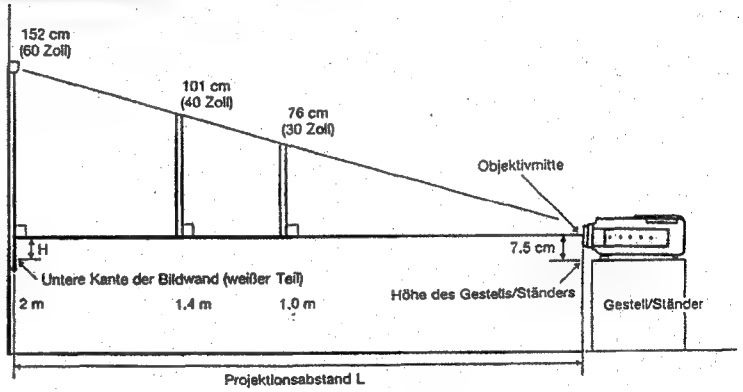
Wenn die Bildwand und der Projektor nicht richtig aufgestellt sind, kann das Bild verzerrt und die ☐ etrachtung erschwert sein.

- Mit dem Zoomobjektiv kann das Bild auf der Bildwand innerhalb des Fokusierungsbereiches frei eingestellt werden.
- Der Projektionsabstand des Objektivs beträgt 1 m–4 m. Der Abstand zwischen Projektor und Bildwand sollte innerhalb dieses Bereiches liegen.

Abhängigkeit zwischen Projektionsabstand und Bildgröße

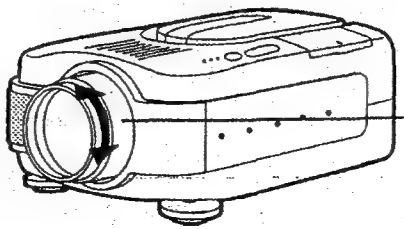
Bildgröße (diagonal)	Projektionsabstand L	Abstand zwischen Objektivmitte und der unteren Kante der Bildwand (H)
152 cm (60 Zoll)	2,0 m	ca. 23 cm
101 cm (40 Zoll)	1,4 m	ca. 16 cm
76 cm (30 Zoll)	1,0 m	ca. 12 cm

Höhe des Projektors



- Nach dem Aufbau des Projektors die Schärfe wie folgt einstellen.

Scharfstellung



- Das Objektiv so einstellen, daß das projizierte Bild so scharf wie möglich ist.

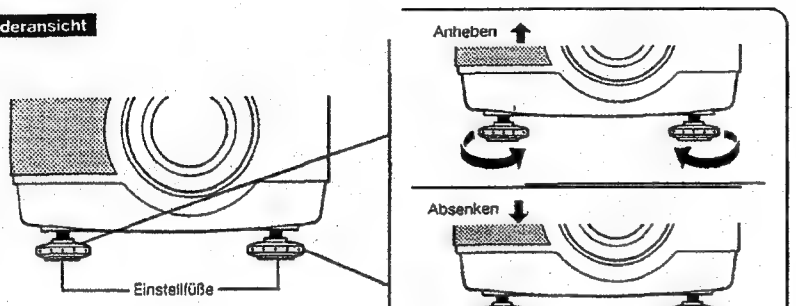
Zur Scharfstellung des Bildes den Scharfstellring drehen.

Aufbau des Projektors

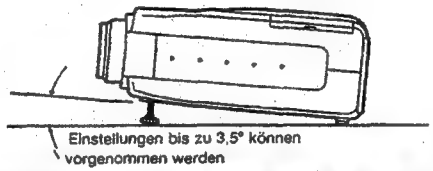
Einstellung von Horizontale und Höhe

■ Die Einstellfüße auf der Unterseite des Projektors zum Einstellen der Höhe verwenden.

Vorderansicht



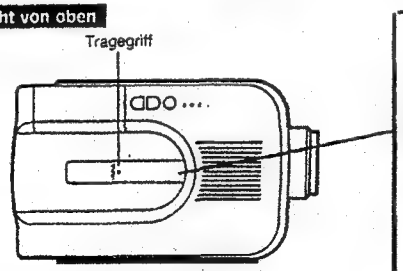
Wenn die Höhe des Projektors mit den Einstellfüßen eingestellt wird, ist das Bild auf der Bildwand verzerrt, da der Projektor nicht mehr im rechten Winkel zur Bildwand steht.



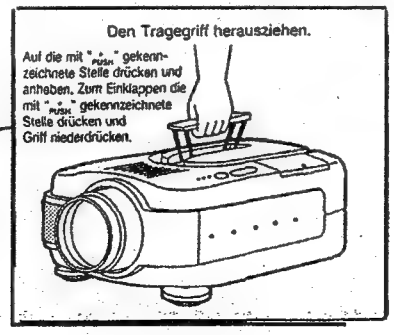
Transport des Projektors

■ Den Tragegriff zum Transportieren des Projektors verwenden.

Ansicht von oben



Zum Transportieren des Projektors die Objektivkappe zum Schutz des Objektivs aufsetzen.

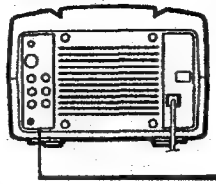


Anschluß des Projektors

SYSTEM 1

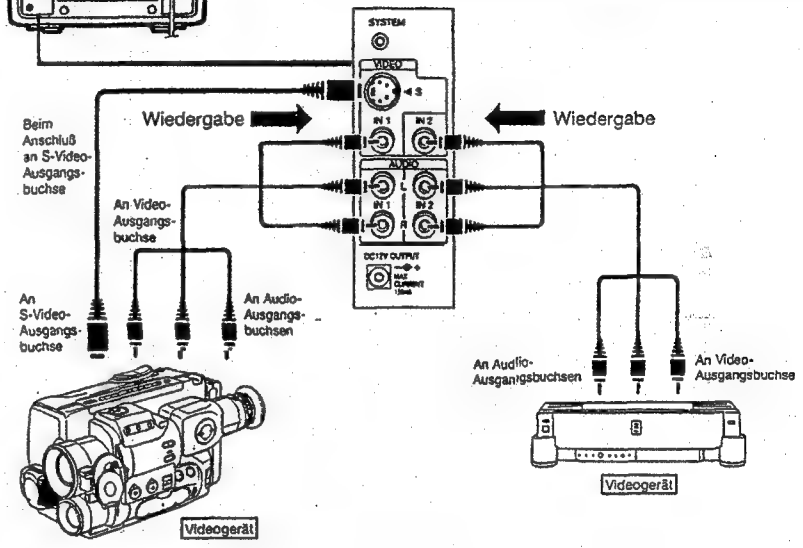
Anschluß des Projektors an Videogeräte für die Wiedergabe.

Rückseite

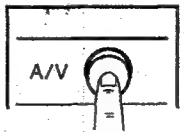


Hinweise:

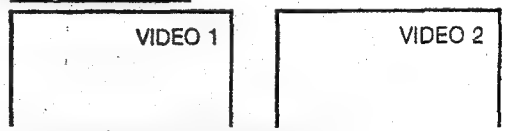
- Beim Anschluß von Videogeräten ist sicherzustellen, daß der Projektor ausgeschaltet ist. Dadurch werden sowohl der Projektor als auch die anzuschließenden Geräte geschützt.
- Siehe die Bedienungsanleitung der anzuschließenden Geräte für die richtige Durchführung der Anschlüsse.



Mit der AV Wahltaste VIDEO 1 oder VIDEO 2 einstellen.



Anzeige auf der Bildwand



Funktion für Prioritätseingang des S-Videoanschlusses.
Der Videoeingangsanschluß 1 und der S-Videoeingangsanschluß an diesem Projektor sind so eingestellt, daß der S-Videoeingang Vorrang hat.

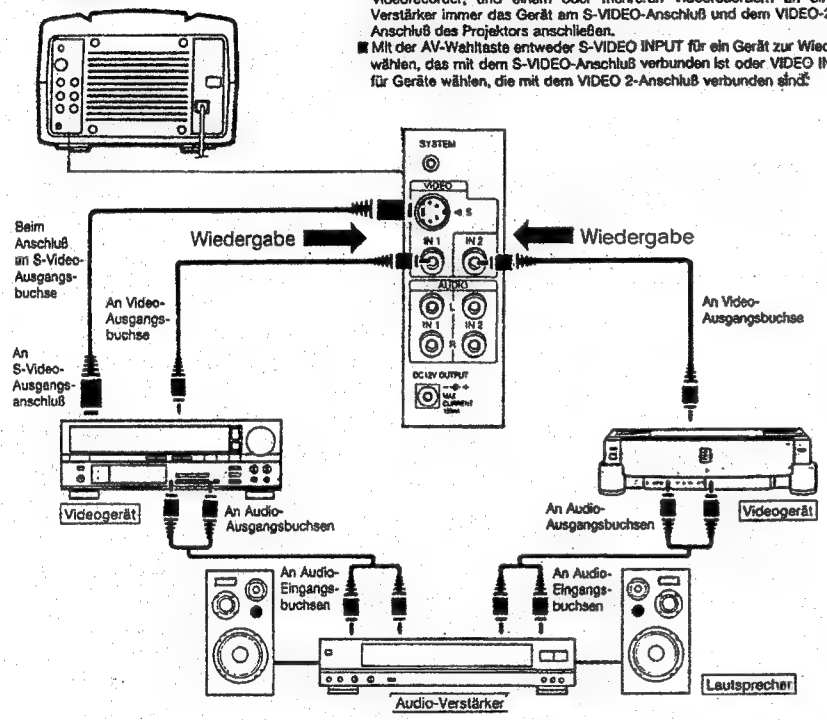
- Wenn Videogeräte an beiden Anschlüssen angeschlossen sind, wird das Videosignal vom S-Videoeingangsanschluß auf dem Bildschirm angezeigt.
- Zur Darstellung des Videosignals von Videogeräten, die am Videoeingangsanschluß 1 angeschlossen sind, wird der Stecker vom S-Videoeingangsanschluß abgetrennt.

SYSTEM 2

Anschluß des Projektors an Video- und Audiogeräte für die Wiedergabe. (Mit einem Audio-Verstärkeranschluß.)

Rückseite

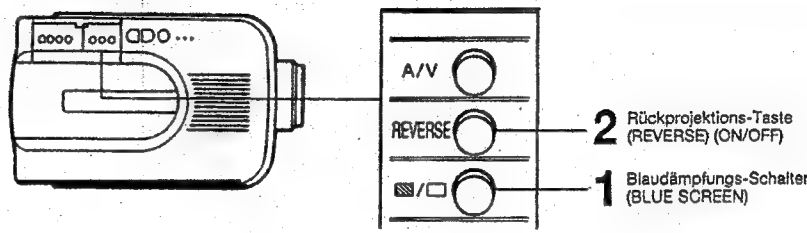
- Beim Anschluß von Geräten mit einem S-Videoausgang, z.B. einem S-VHS-Videorecorder, und einem oder mehreren Videorecordern an einen AV-Verstärker immer das Gerät am S-VIDEO-Anschluß und dem VIDEO-2 JACK-Anschluß des Projektors anschließen.
- Mit der AV-Wahltaste entweder S-VIDEO INPUT für ein Gerät zur Wiedergabe wählen, das mit dem S-VIDEO-Anschluß verbunden ist oder VIDEO INPUT 2 für Geräte wählen, die mit dem VIDEO 2-Anschluß verbunden sind.



Sonstige Funktionen

- Bei eingeschalteter Blaudämpfungs-Funktion wird die Anzeige auf der Bildwand auf blau geschaltet, wenn kein Videosignal in den Projektor eingegeben wird.
- Den Blaudämpfungs-Schalter zum Ausschalten der Blaudämpfungs-Funktion noch einmal drücken.

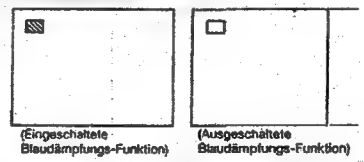
Bedienelemente hinter der Abdeckung



1 Blaudämpfungs-Funktion

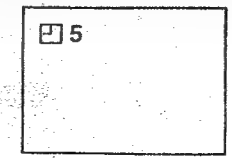
- Beim Drücken des Blaudämpfungs-Schalters wird für einige Sekunden die folgende Anzeige auf der Bildwand angezeigt.

Anzeige auf der Bildwand



(Eingeschaltete Blaudämpfungs-Funktion) (Ausgeschaltete Blaudämpfungs-Funktion)

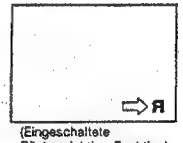
- Bei Einstellung des Blaudämpfungs-Schalters auf die -Position (ON) wird der Projektor auf Blauwiedergabe umgeschaltet, wenn kein Signal oder Rauschen eingegeben wird. (Wenn die Blaudämpfungs-Funktion länger als 15 Minuten eingeschaltet ist, wird die automatische Abschaltfunktion aktiviert und das Gerät automatisch ausgeschaltet. Fünf Minuten vor dem Ausschalten wird die verbleibende Zeit (in Minuten) in Abständen von einer Minute in der linken oberen Ecke der Bildwand angezeigt.)



2 Rückprojektion

- Nach dem Drücken der Rückprojektions-Taste auf die Rückprojektions-Betriebsart wird für einige Sekunden die folgende Anzeige auf der Bildwand angezeigt.

Anzeige auf der Bildwand

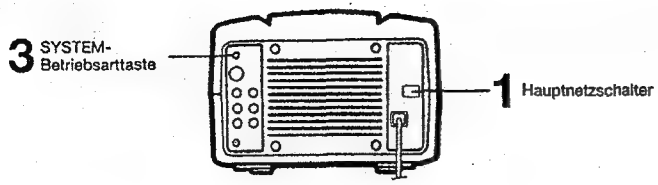


(Eingeschaltete Rückprojektion-Funktion)

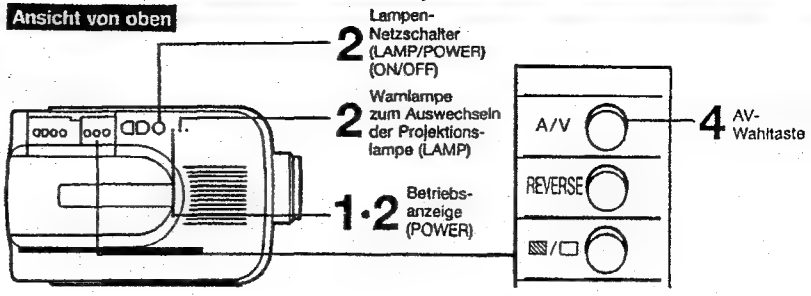
- Wenn ein Spiegelbild oder ein umgekehrtes Bild für eine Rückprojektion notwendig ist, kann das Bild mit der Rückprojektions-Taste umgeschaltet werden. Die Rückprojektions-Taste drücken. Das auf der Bildwand wiedergegebene Bild wird als Spiegelbild des Videoeingangssignals wiedergegeben. Die Taste erneut drücken: Jetzt wird das Bild wieder normal wiedergegeben.

Verwendung des Projektors

Ansicht von hinten



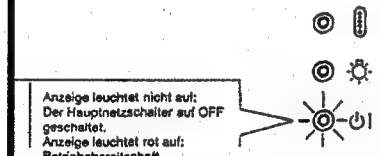
Ansicht von oben



1 Den Hauptnetzschalter einschalten.

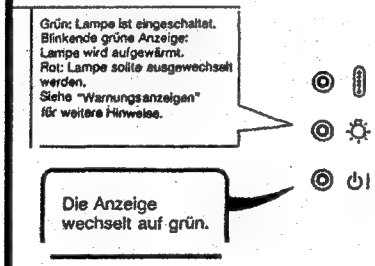
Den Hauptnetzschalter auf ON stellen.

- Bei der erstmaligen Verwendung des Projektors oder wenn die Betriebsanzeige nicht aufleuchtet, wird der Hauptnetzschalter auf ON gestellt. (Anzeige leuchtet rot auf.)
- Die Betriebsanzeige erlöscht, wenn der Hauptnetzschalter auf OFF geschaltet wird.



2 Einschalten der Lampe

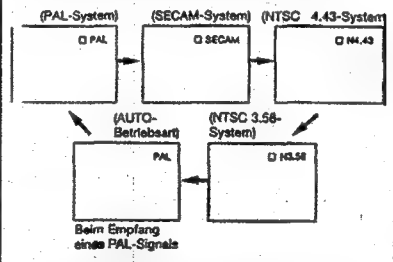
Den Lampen-Netzschalter (ON/OFF) drücken.



3 Systemwechsel

Die SYSTEM-Taste drücken

- Beim Drücken der Taste wird das gewählte Fernsehsystem in der oberen rechten Ecke der Bildwand für einige Sekunden angezeigt.

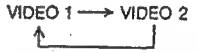


*In der automatischen Betriebsart wird "PAL", "SECAM", "NTSC 4.43" oder "NTSC 3.58" für einige Sekunden auf der Bildwand angezeigt, wenn die Betriebsart automatisch geändert wird.

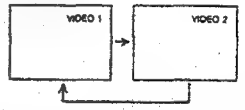
4 AN-Wahl

Die A/V-Wahltaste drücken.

- A/V-Taste auf dem Bedienfeld des Projektors Beim Drücken der Taste ändert sich die Anzeige wie folgt:



Die Anzeige auf der Bildwand ändert sich wie in der folgenden Abbildung.



Hinweise:

- Selbst wenn die Stromversorgung mit dem Hauptnetzschalter ausgeschaltet ist, arbeitet der Kühlventilator weiter, solange eine hohe Temperatur im Innern des Projektors vorhanden ist (ca. 90 Sekunden). Nicht das Netzkabel ziehen, solange der Kühlventilator arbeitet.
- Wenn der Projektor sofort nach dem Ausschalten wieder eingeschaltet wird, kann bis zum Einschalten der Lampe eine kurze Zeit vergehen. (Während dieser Zeit blinkt die Betriebsanzeige für die Projektionslampe grün.)

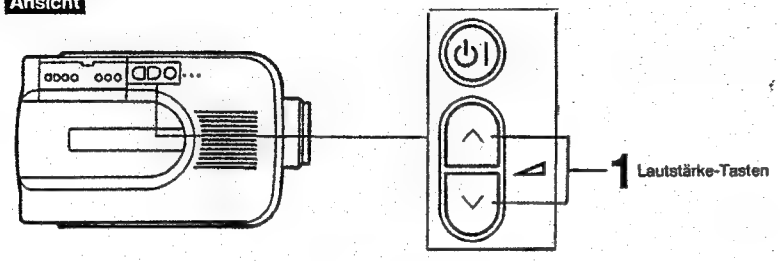
Hinweise:

- Dieser Projektor ist mit drei Videoeingangs-Systemen ausgestattet: S-Video, Video-1 und Video-2.
- Zur Wahl zwischen diesen Systemen die A/V-Wahltaste zur Wahl des Eingangs von den VIDEO-1-(S-VIDEO hat Vorrang) oder VIDEO-2-Buchsen verwenden.

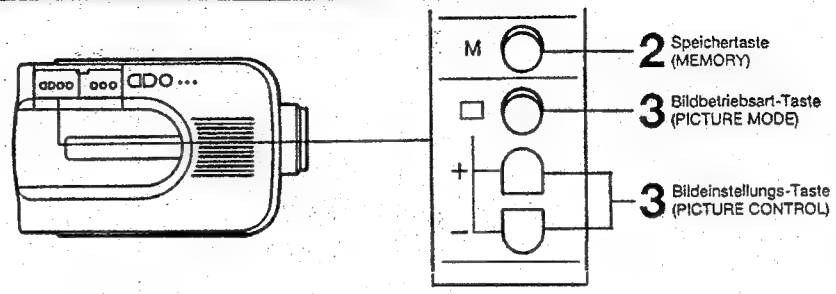
Bild- und Toneinstellungen

- Das Bild dieses Projektors ist ab Werk auf Standard-Wiedergabe eingestellt. Mit den VIDEO ADJUST-Tasten kann das Bild nach Wunsch eingestellt werden.
- Die Einstellungen mit den Tasten werden gespeichert.

Ansicht

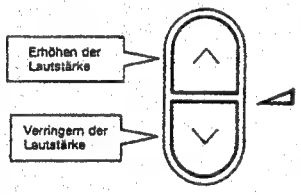


Bedienelemente hinter der Abdeckung

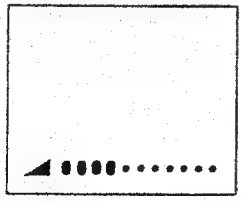


1 Einstellung der Lautstärke

Die Lautstärke-Taste drücken.



Anzeige auf der Bildwand



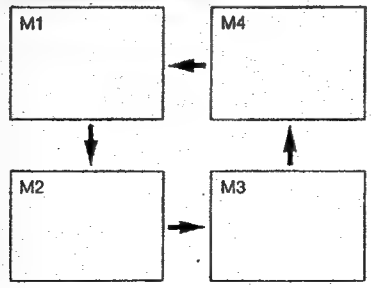
Die Anzahl der angezeigten Punkte (0–16) verringert oder erhöht sich je nach Einstellung der Lautstärke.

2 Speichern von Bildeinstellungen

Die Speichertaste drücken.

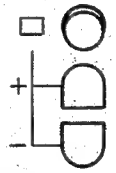
- Beim Drücken der Speichertaste werden die gegenwärtigen Einstellungen für ca. vier Sekunden auf der Bildwand angezeigt.

Anzeige auf der Bildwand

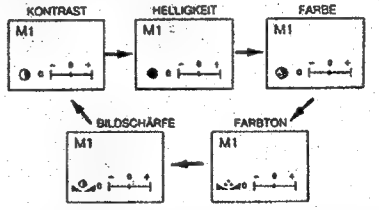


3 Bildeinstellungen

Die Bildbetriebsart- und Bildeinstellungs-Tasten zur gewünschten Einstellung verwenden.



Beim Drücken der Bildbetriebsart-Taste ändert sich die Bild-Betriebsart wie folgt.
(M1 zeigt die Speichernummer an.)

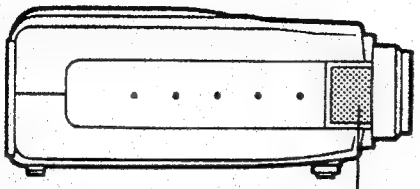


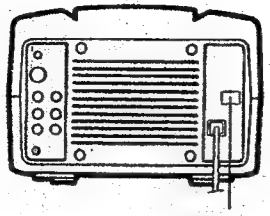
- Die einzustellende Betriebsart wählen und mit den Bildeinstellungs-Tasten die Einstellungen vornehmen.
- *Die Betriebsarten werden für einige Sekunden auf der Bildwand angezeigt. Die Einstellungen müssen während der Anzeige auf der Bildwand vorgenommen werden.

Die Farbton-Einstellung kann nur bei einem NTSC-Signal durchgeführt werden.

Reinigung des Luftfilters

■ Der Filter sollte alle 100 Betriebsstunden gereinigt werden. Wenn der Projektor Staub oder Rauch ausgesetzt ist, sollte der Filter öfter gereinigt werden.
- Wenn der Luftfilter zu schmutzig zum Reinigen ist, sollte er ausgewechselt werden. Wenden Sie sich in diesem Fall an den Händler.



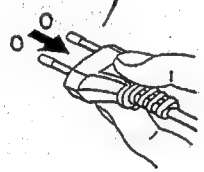


1 Gerät ausschalten

Den Hauptnetzschalter auf OFF stellen.

2 Ziehen des Netzsteckers

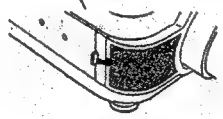
Zum Ziehen des Netzsteckers bitte am Stecker anfassen und keinesfalls am Kabel ziehen.



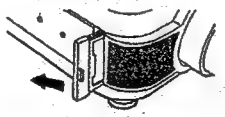
In manchen Ländern kann die Form des Steckers von der Abbildung abweichen.

3 Den Luftfilter entfernen.

Zum Entfernen des Luftfilters zuerst die vorspringende Lasche greifen und dann den Filter in Pfeilrichtung bewegen.

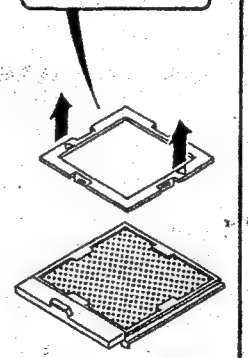


Dann den Filter gerade in Pfeilrichtung herausziehen.



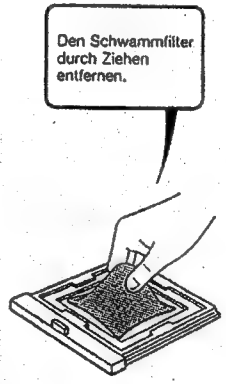
4 Den Filterhalter entfernen

Den "Δ"-markierten Teil der Filterhalters in Pfeilrichtung ziehen, um den Filterhalter loszuhaken.



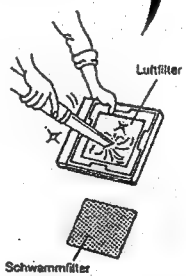
5 Den Schwammfilter entfernen.

Den Schwammfilter durch Ziehen entfernen.



6 Den Luftfilter reinigen.

Den Staub von Luftfilter und Schwammfilter mit einem Staubsauger absaugen.

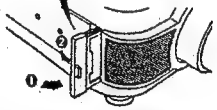


Wenn der Filter sehr schmutzig ist, ihn mit einem neutralen, in kaltem oder lauwarmem Wasser aufgelösten Reinigungsmittel säubern, dann den Filter in der Sonne trocknen lassen.

7 Den Luftfilter auswechseln.

Den Schwammfilter im Luftfilter auswechseln.

Den Luftfilter wieder anbringen.



Die oberen und unteren Kanten mit den Nuten im Projektor angleichen und den Filter einschieben.

Lampe

■ Die Projektionslampe hat eine begrenzte Lebensdauer.

Wenn die Lampe fast verbraucht ist, nehmen die Bild- und Farbqualität ab. Die Lampe durch den Kundendienst auswechseln lassen.

Das Auswechseln der Projektionslampe erfordert technische Fachkenntnisse und sollte nur durch Ihren Sharp-Händler oder den Sharp-Kundendienst erfolgen.

Warnlampen

■ Die Warnlampen des Projektors leuchten auf, wenn irreguläre Bedingungen vorliegen.
■ Der Projektor besitzt Warnlampen für Überhitzung und für erforderliches Auswechseln der Lampe.
■ Wenn ein Defekt des Projektors auftritt, leuchtet die Überhitzungs- oder Projektionslampen-Warnlampe rot auf und das Gerät schaltet sich aus. In solchen Fällen den Hauptnetzschalter ausschalten und die folgenden Prüfungen vornehmen.

Warnlampe	Symptom	Mögliche Fehlerquellen	Maßnahmen
Überhitzung	Innentemperatur zu hoch.	• Lufteinlässe blockiert	• Projektor an einer günstigeren Stelle aufstellen.
		• Luftfilter zugesetzt	• Luftfilter reinigen
		• Kühlgebläse defekt • Interne Schaltungen defekt	Projektor in Reparatur geben.
Projektionslampe	Projektionslampe leuchtet nicht.	• Projektionslampe am Ende ihrer Lebensdauer • Projektionslampenschaltkreis defekt	Projektor in Reparatur geben.

HINWEISE:
Wenn die Überhitzungs-Warnlampe rot aufleuchtet und das Gerät ausgeschaltet wird, stellt sich der Projektor auf die Bereitschafts-Betriebsart ein.
Nach dem Ausschalten des Projektors warten, bis die Temperatur im Inneren des Gerätes vor dem Wiedereinschalten ausreichend abgekühlt ist (mindestens fünf Minuten).

Bei Störungen

Kein Bild	• Der Projektor ist nicht an eine Netzsteckdose angeschlossen. • Der Hauptnetzschalter (MAIN POWER) ist ausgeschaltet. • Der Helligkeitsregler (BRIGHT) (–) ist auf Minimum gestellt.
Schwache oder verschwommene Farben	• Sind die Farben (siehe "Bild- und Toneinstellungen") richtig eingestellt?
Verschwommenes Bild	• Die Schärfe einstellen. • Der Projektionsabstand ist zu groß oder zu klein für eine richtige Scharfstellung.
Aus dem Gehäuse kommen manchmal außergewöhnliche Geräusche.	• Wenn das Bild normal ist, entstehen Geräusche durch Verziehungen des Gehäuses durch Temperaturänderungen. Dies hat keinen Einfluß auf den Betrieb.
Warnlampe leuchtet	• Siehe "Warnlampen"
Kein Ton	• Überprüfen, ob der Lautstärkeregler vollständig zurückgedreht ist • Überprüfen und sicherstellen, daß die Kabel auf der Rückseite des LCD-Projektors richtig angeschlossen sind.

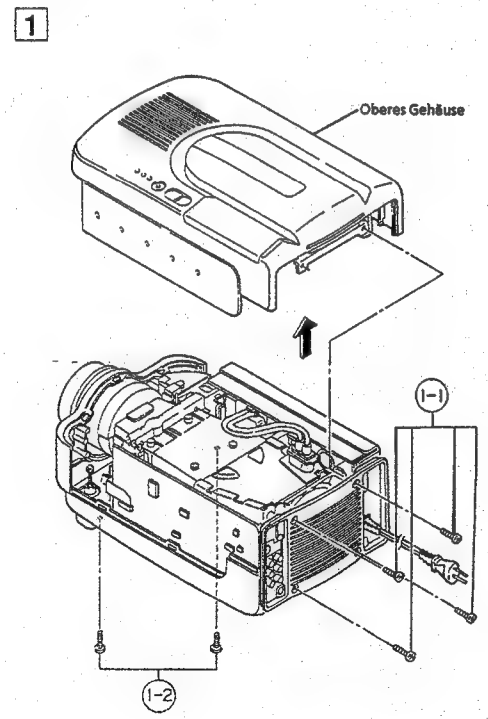
ENTFERNEN DER HAUPTTEILE

1. Entfernen der Rückplatte

1-1. Die sechs Schrauben der Rückplatte losschrauben und dann die Rückplatte abnehmen.
1-2. Die beiden Schrauben an der Geräteunterseite losschrauben. Das Gehäuseoberteil nach oben ziehen.

Zur Beachtung beim Umgang mit dem Gehäuse

Beim Abnehmen und Anbringen des Gehäuseoberteils müssen die folgenden Punkte beachtet werden.
Das Kabel, über das die Lautsprecher im Gehauseoberteil mit der Hauptplatine verbunden sind, ist kurz. Das Gehauseoberteil nicht zu weit nach oben ziehen, weil sonst der Kabelstecker beschädigt werden kann. Das Gehäuseoberteil langsam ein wenig anheben, das Lautsprecherkabel vom Steckverbinder "SP" auf der Hauptplatine abtrennen und dann das Gehauseoberteil vollständig abnehmen. Um das Gehauseoberteil wieder anzubringen, zuerst das Lautsprecherkabel wieder an den Steckverbinder "SP" auf der Hauptplatine anschließen, dann das Gehauseoberteil auf das Gehäuseunterteil setzen. Dabei muß das flexible Kabel, das zwischen der LCD-Tafel und der Hauptplatine verläuft, im Gehauseoberteil gehalten werden.
Dieses Kabel kann zwischen dem Gehäuseoberteil und Gehäuseunterteil eingeklemmt werden.

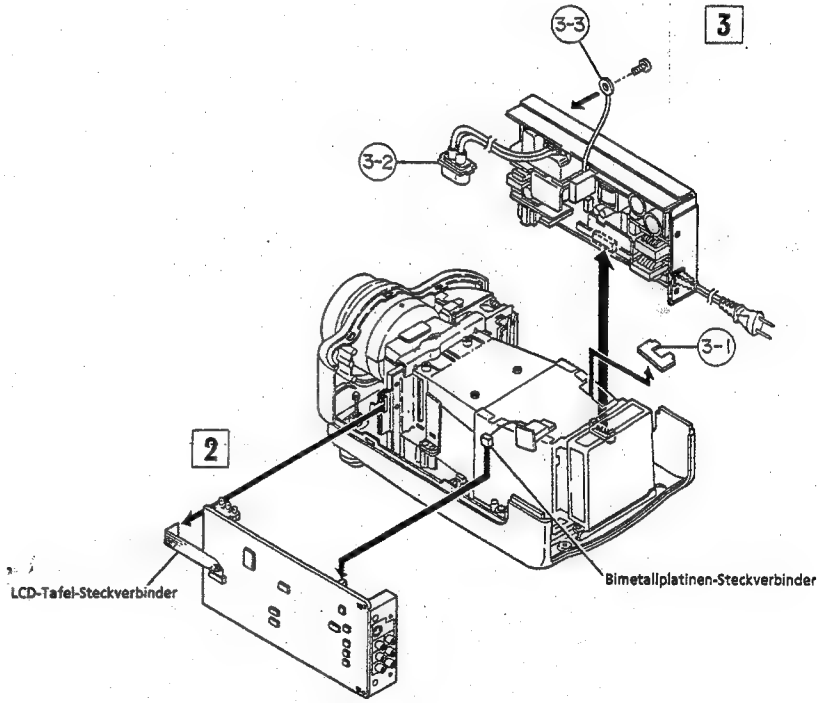


2. Entfernen der Platine

Den Steckverbinder der LCD-Tafel und den Steckverbinder des Bimetallteils lösen.

3. Entfernen des Lampenvorschaltgeräts und der Netzplatineneinheit.

3-1. Die Lampenführungsverriegelung aufdrehen und die Lichtabschirmplatte herausnehmen.
3-2. Die Verriegelung der Lampenführungshalterung losdrehen und die Halterung abnehmen.
3-3. Die Schraube losschrauben, um die Erdungsanschlußklemme zu lösen. Dann das Lampenvorschaltgerät und das Netzgerät herausnehmen.



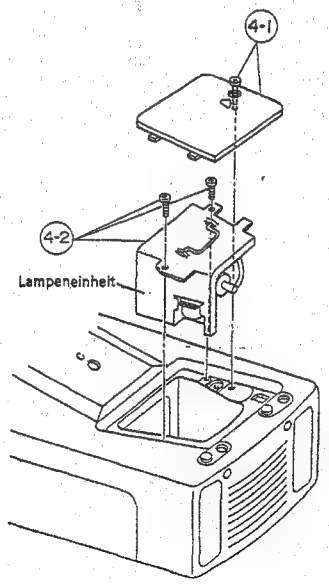
4. Entfernen der Lampeneinheit

4-1. Die Schraube losschrauben, um die Bodenabdeckung abzunehmen.
4-2. Die beiden Schrauben der Lampeneinheit losschrauben. Die Lampeneinheit herausnehmen.

5. Entfernen der Qptikeinheit

Dei vier Schrauben der Optikeinheit losschrauben und die Optikeinheit herausnehmen.

4



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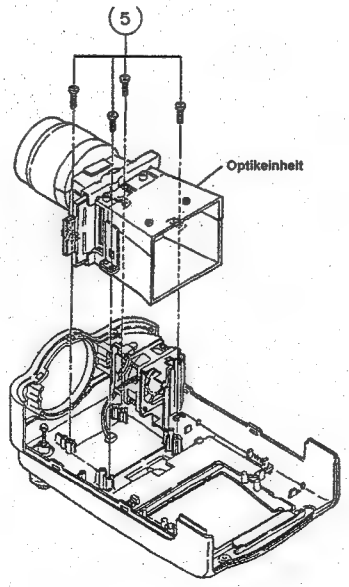


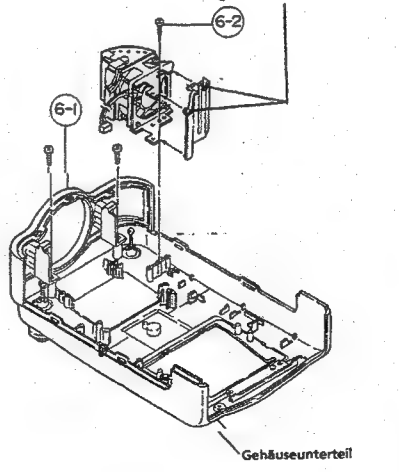
6. Entfernen des Gebläses

6-1. Die beiden Schrauben losschrauben, um die Frontabdeckung des Gerätes herauszunehmen.
6-2. Die vier Klauen gedrückt halten und die Luftkanalhalterung lösen. Dann die Schraube losschrauben, um die Gebläseeinheit herauszunehmen.

7. Zerlegung und Wiederzusammenbau der Optikeinheit

7-I. Die obere Abdeckung der Optikeinheit hochziehen.
7-2. Das Projektionsobjektiv im Uhrzeigersinn drehen und das Objektiv abnehmen.
7-3. Die folgenden Teile der Optikeinheit hochziehen: Fresnel-Linse, Lichteintritt-Ablenkplatte, LCD-Tafel, Lichtaustritt-Ablenkplatte, Kondensorlinse und U/V-Sperrfilter.

6



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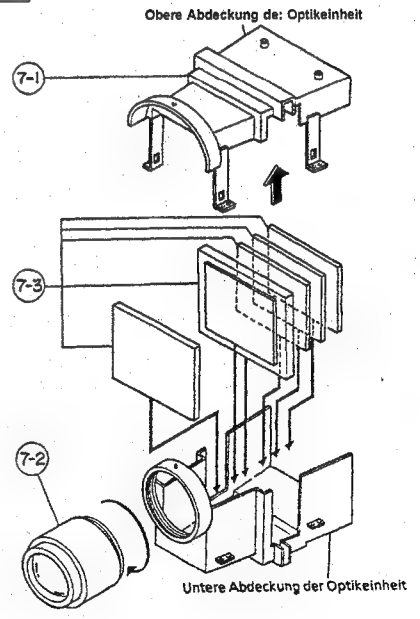
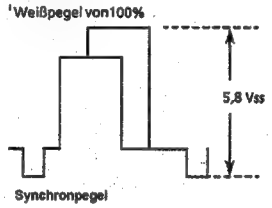
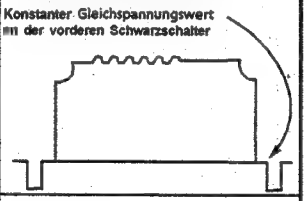
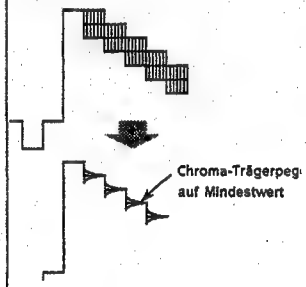
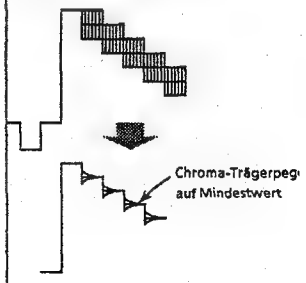
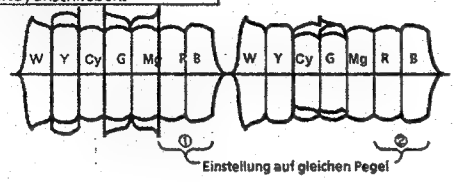
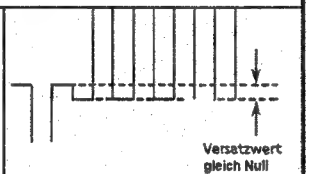
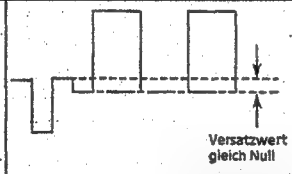
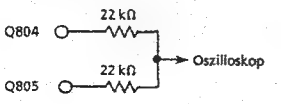
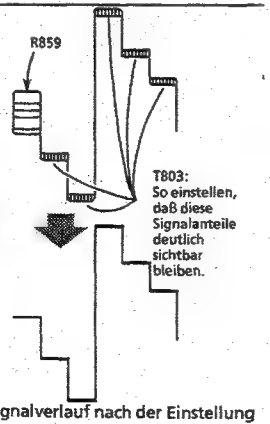


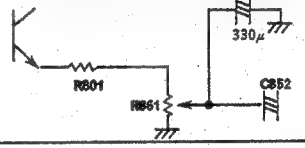
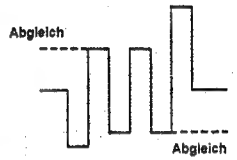
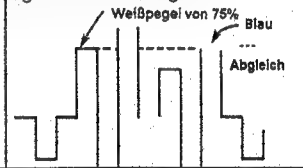
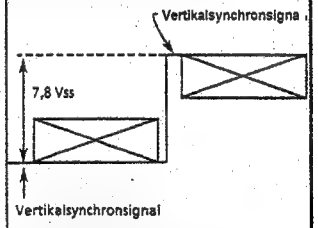
EINSTELLUNG DER ELEKTRISCHEN BAUTEILE

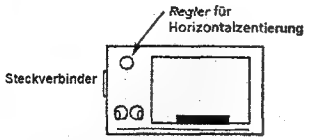
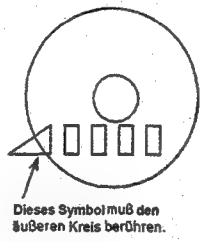
Hinweis; Wenn nicht anders angegeben, sind alle Einstellungen bei Normalbedingungen vorzunehmen.

	Einstellposition	Einstellzustand	Einstellverfahren
1	AGC (Automatische Verstärkungsregelung): R1546	• Empfang des NTSC-Monoskopmustersignals. • Voltmeter zwischen TP1501 und Masse (GND) anschließen.	Mit RI546 am Voltmeter eine Spannung von 3,0 ±0,05V einstellen.
2	Y-Pegel: R861	• Empfang des NTSC-Farbbalkensignals. • Zur Deaktivierung der Gamma-Korrektur eine Spannung von 5 V an TP1604 legen. • Ein Oszilloskop zwischen TP1602 und Masse (GND) anschließen. • Die Gamma-Korrektur aktivieren. Ist das Signal nicht synchron oder der Weißanteil verfälscht, durch Verstellen von RI604 den ursprünglichen Zustand wiederherstellen.	Mit R861 den Spannungsunterschied zwischen Synchronpegel und 100-%-Weißpegel auf 5,8 ± 0,1 Vss 
3	Hilfshelligkeitseinstellung: R2139	• Empfang des NTSC-Monoskopmustersignals. • Das Oszilloskop zwischen TP1602 (G-Ausgang) und Masse (GND) anschließen. • 5 V über einen 6,8-kΩ-Widerstand an TP2001legen.	Eine 5-V-Lastspannung an TP1604 anlegen und wieder wegnehmen. Diesen Vorgang einige Male wiederholen. Mit R2139 die Gleichspannung an der vorderen Schwarzschulter unabhängig von der Lastspannung an TP1604 auf konstanten Wert einstellen. 
4	Hilfsvorspannung :R1604 (Grün)	• Empfang des NTSC-Farbbalkensignals. • Das Oszilloskop zwischen TP1602 und Masse (GND) anschließen.	Mit RI604 den Spitzenwert des Synchronsignals auf -5,5±0,5V einstellen.
5	Hilfsvorspannung :R1602 (Rod)	• Empfang des NTSC-Farbbalkensignals. • Das Oszilloskop zwischen TP1601 und Masse (GND) anschließen.	Mit RI602 die Gleichspannungen an TP1601 und TP1602 auf gleichen Wert einstellen. Gleichspannung an TP1602±0,1V

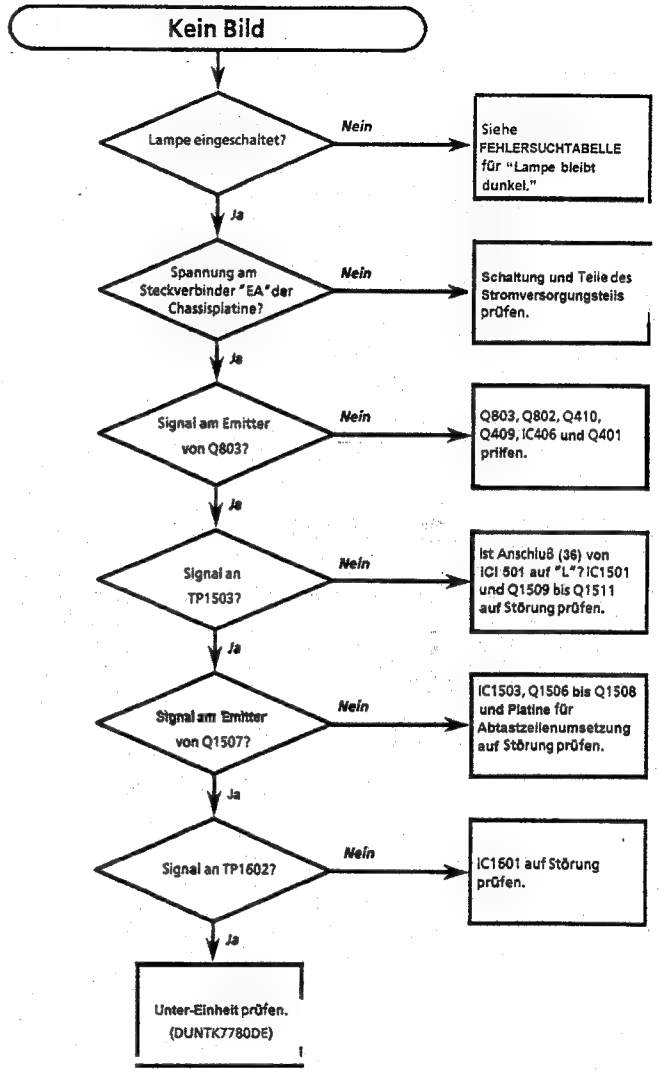
	Einstellposition	Einstellzustand	Einstellverfahren
6	Hilfsvorspannung : R1608 (Blau)	• Empfang des NTSC-Farbbalkensignals. • Das Oszilloskop zwischen TP1603 und Masse (GND) anschließen.	Mit R1608 die Gleichspannungen an TP1603 und TP1602 auf gleichen Wert einstellen. Gleichspannung an TP1602 ±0,1V
7	Weißabgleich: R1629 (B-Ausgang)	• Empfang des NTSC-Monoskopmustersignals. • Kanal CH1 des Oszilloskops mit TP1602 verbinden. • Kanal CH2 des Oszilloskops mit TP1603 (B-Ausgang) verbinden und den Signalverlauf umkehren.	Die Signalverläufe für CH1 und CH2 in Betriebsart ADD verfolgen. Mit R1629 die Amplitude auf Mindestwert einstellen.
8	Weißabgleich: R1623 (R-Ausgang)	• Empfang des NTSC-Monoskopmustersignals. • Kanal CH1 des Oszilloskops mit TP1602 verbinden. • Kanal CH2 des Oszilloskops mit TP1601 (R-Ausgang) verbinden und den Signalverlauf umkehren.	Die Signalverläufe für CH1 und CH2 in Betriebsart ADD verfolgen. Mit RI623 die Amplitude auf Mindestwert einstellen.
9	Chroma-Falle: T402	• Empfang des PAL-Farbbalkensignals. • Oszilloskop zwischen TP401 und Masse (GND) anschließen.	Mit T402 den Chroma-Trägerpegel auf Mindestwert einstellen. 
10	Chroma-Falle: T401	• Empfang des SECAM-Farbbalkensignals. • Obzilloskop zwischen TP401 und Masse (GND) anschließen.	Mit T401 den Chroma-Trägerpegel auf Mindestwert einstellen. 

	Einstellposition	Einstellzustand	Einstellverfahren
11	**SECAM-Pegelfilter: T805**	• Empfang des SECAM-Farbbalkensignals. • Oszilloskop zwischen TP806 und Masse (GND) anschließen.	Mit T805 die R/B-Signalanteile (1) und (2) auf den beiden kanäle auf gleiche Amplitude einstellen. 
12	**SECAM-B-Y: T802**	• Empfang des SECAM-Farbbalkensignals. • Oszilloskop zwischen TP803 und Masse (GND) anschließen. • Mit T802 den Versatzwert auf Null einstellen. Siehe hierzu die Abbildung rechts.	
13	**SECAM-R-Y: T801**	• Empfang des SECAM-Farbbalkensignals. • Oszilloskop zwischen TP804 und Masse (GND) anschließen. • Mit T801 den Versatzwert auf Null einstellen. Siehe hierzu die Abbildung rechts.	
14	**SECAM-ID: T804**	• Empfang des SECAM-Farbbalkensignals. • Oszilloskop zwischen TP805 und Masse (GND) anschließen.	Mit T804 den höchsten Gleichspannungswert einstellen.
15	**PAL-1H-Verzögerung, Phase: T803 PAL-1H-Verzögerung, Verstärker: R859**	• Empfang des PAL-Farbbalkensignals (Kanal E12). • 2,2-kΩ-Widerstände jeweils mit den Emittern von Q804 und Q805 verbinden. Nun das Oszilloskop zwischen der Mittelanzapfung und Masse (GND) anschließen. Siehe die folgende Abbildung. Matrix-Schaltung 	 Signalverlauf nach der Einstellung

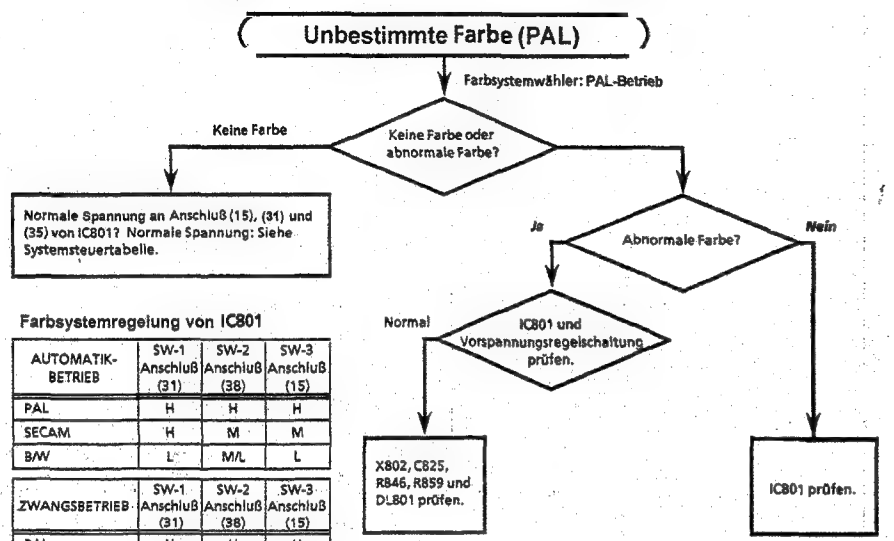
	Einstellposition	Einstellzustand	Einstellverfahren
16	**NTSC-Farbton: R860**	• Empfang des NTSC-Farbbalkensignals. • Den Farb- und kontrastregler an der Frontplatte um 10 Stufen in Richtung Rotfarbtönung verstellen (-10 punkte). Zur Reduzierung des Y-Pegels einen 330-μF-Kondensator gemäß folgender Abbildung anschließen. 	Mit R860 den Signalverlauf gemäß folgender Abbildung einstellen. 
17	**Farbsättigung: R858 (Hilfsfarbe)**	• Empfang des NTSC-Farbbalkensignals. • Das Oszilloskop zwischen TP803 und Masse (GND) anschließen. • Farb- und Kontrastregler auf + 7 punkte einstellen.	Mit R858 den Signalverlauf gemäß folgender Abbildung einstellen. 
18	**Hilfsvorspannung (RGB): R1434**	• Empfang des Monoskopmustersignals. • Das Oszilloskop zwischen TP1405 (G-Ausgang) und Masse (GND) anschließen.	Mit R1434 die Vertikalsynchronpegeldifferenz zwischen den Schwarzanteilen an TP1405 auf 7,8 ± 0,1 Vss einstellen. 
19	**Zählervorspannung: R520**	• Dieoe Einstellung in einem dunklen Raum mit Hilfe der nachstehend aufgeführten Werkzeuge und Meßgeräte vornehmen. • Empfang des NTSC-Monoskopmustersignals.	Mit R520 den Klangkontrast auf Maximalwert einstellen.
20	**Hilfsvorspannung (Rod): R1602 Hilfsvorspannung (Blau): R1608**	• Empfang des NTSC-Monoskopmustersignals.	Mit R1602 und R1608 die Weißbalance auf Optimalwert einstellen.

	Einstellposition	Einstellzustand	Einstellverfahren
21	**NTSC-Horizontal-zentrierung**	• Empfang des NTSC-Monoskop-mustersignals. 	Mit dem Regler an der Frontplatte (siehe die Abbildung links) das Bild in der Schirmmitte zentrieren.
2	2 **Abtastzeile, Umsetzphase: R1119**	• Empfang des PAL-Monoskop-mustersignals.	Mit R1119 das Bild in Schirmmitte zentrieren.
23	**Schwingung-sfrequenz: L1001**	• Masseanschluß (70) von IC1001. • Frequenzzähler zwischen TP1001 und Masse (GND) anschließen.	Mit L1001 die Schwingung-sfrequenz auf 15,625 ±0,01kHz einstellen.
24	**Schwingung-sfreqyebz: L1002**	• Masseanschluß (43) von IC1001. • Frequenzzähler zwischen TP1002 und Masse (GND) anschließen.	Mit L1002 die Schwingung-sfrequenz auf 15,625 ± 0.01 kHz einstellen.
25	**Markenposition: T2001**	• Die Marken auf den Bildschirm bringen. • Mit T2001 die Marken auf dem Bildschirm positionieren. • Empfang des NTSC-Farbbalken-signals. • Die VOL-Taste drücken.	
26	**Audioausgang: R2062**	• Das Voltmeter zwischen der Mittelanzapfung von R2062 und Masse (GND) anschließen.	Dutch Drücken der VOL-Taste den Lautstärkepegel von Mindestwert auf vierte Stufe bringen (an der die zweite Marke auf Rot umschlägt). Mit R2062 am Voltmeter eine Spannung von 0,8±0,02 V einstellen.

FEHLERSUCHTABELLE



FEHLERSUCHTABELLEN (Fortsetzung)



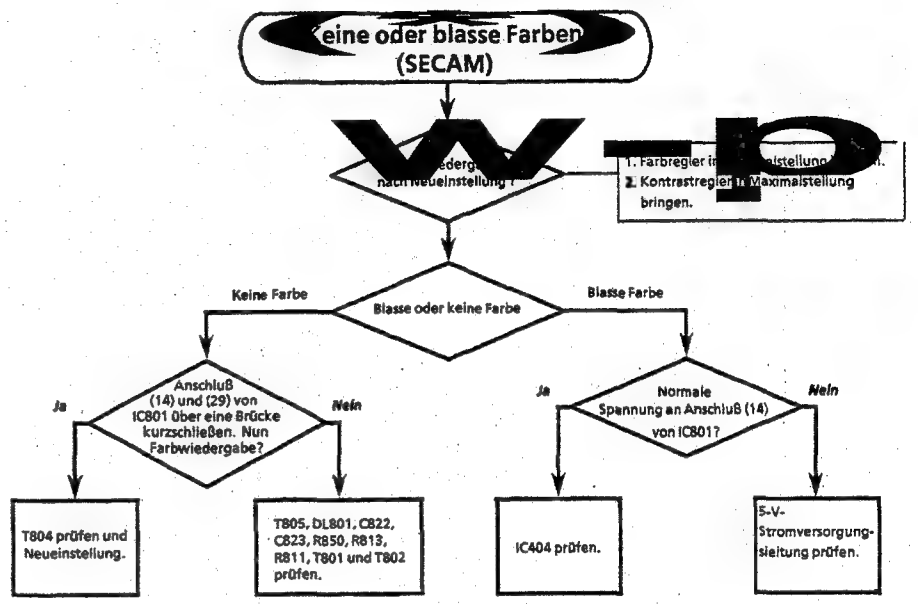
Farbsystemregelung von IC801

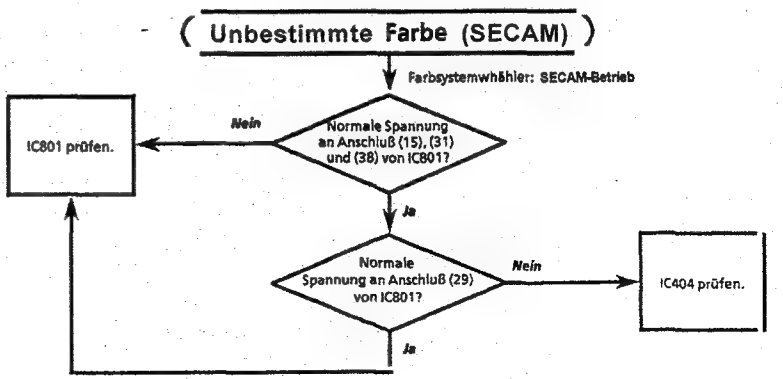
AUTOMATIK-BETRIEB	SW-1 Anschluß (31)	SW-2 Anschluß (38)	SW-3 Anschluß (15)
PAL	H	H	H
SECAM	H	M	M
B/W	L	M/L	L

ZWANGSBETRIEB	SW-1 Anschluß (31)	SW-2 Anschluß (38)	SW-3 Anschluß (15)
PAL	H	H	H
SECAM	H	M	M

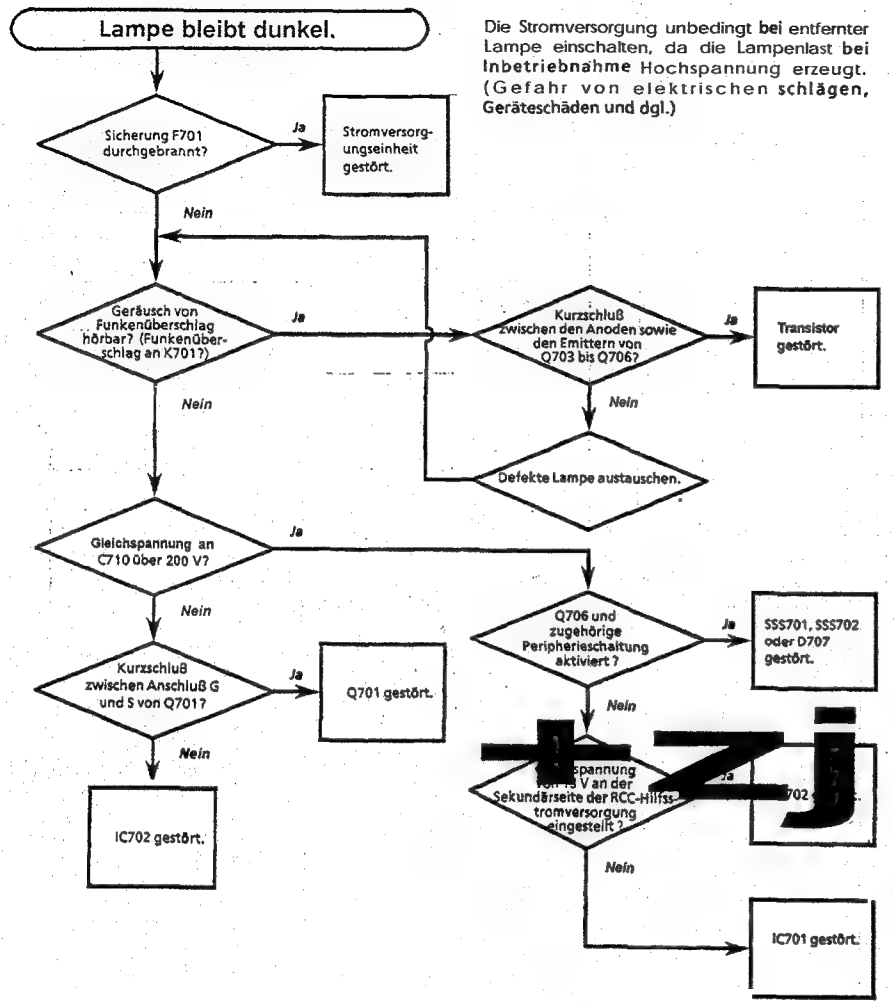
H: über 3V M: 1.5V L: ov

FEHLERSUCHTABELLEN (Fortsetzung)



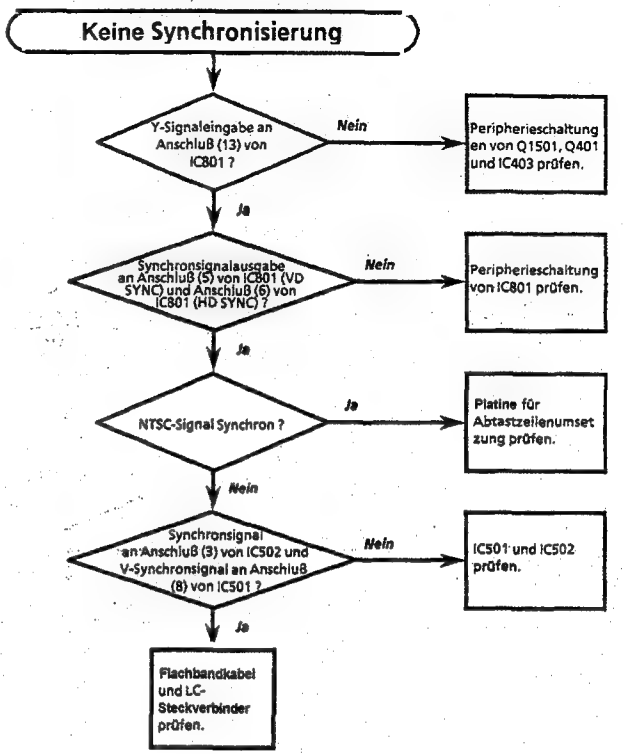


FEHLERSUCHTABELLEN (Fortsetzung)

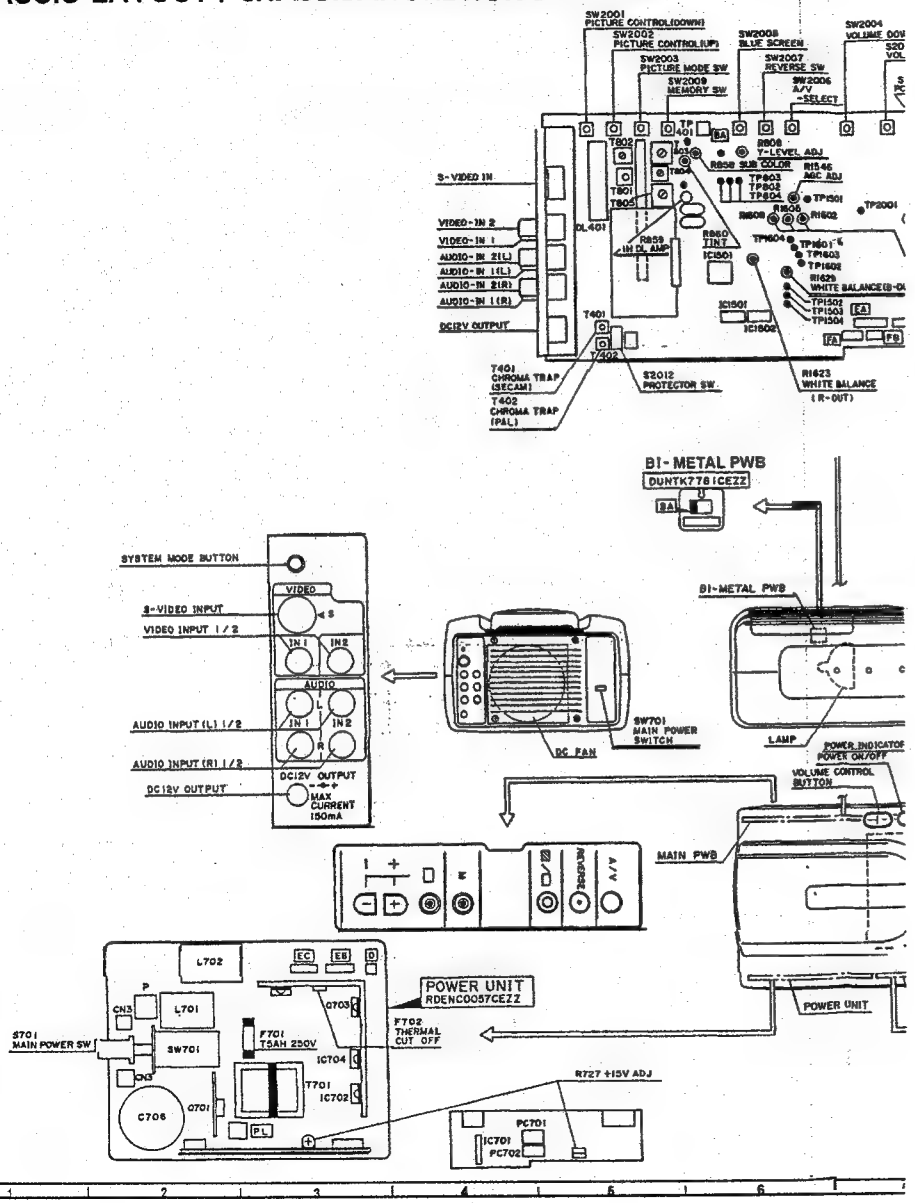


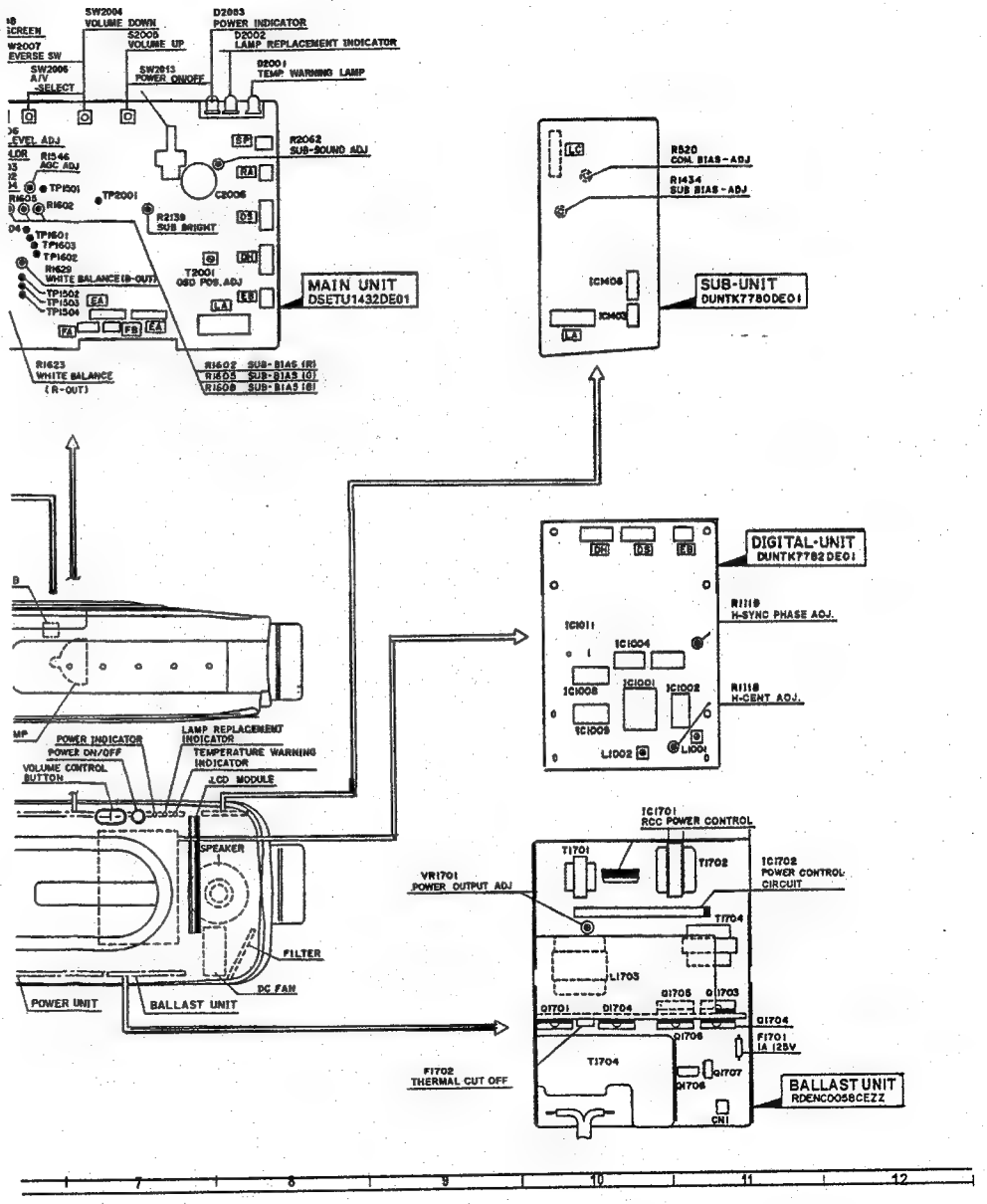
Die Stromversorgung unbedingt bei entfernter Lampe einschalten, da die Lampenlast bei Inbetriebnahme Hochspannung erzeugt. (Gefahr von elektrischen schlägen, Geräteschäden und dgl.)

FEHLERSUCHTABELLEN (Fortsetzung)



CHASSIS LAYOUT / CHASSISANORDNUNGSPLAN





DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. Voltages at test points are measured at the supply voltage of AC 220V. Signals are fed by a colour bar signal generator for servicing purpose and the above voltages are measured with a 20-kohm/V tester.

WAVEFORM MEASUREMENT CONDITION:

1. Waveforms at test' points are observed at the supply voltage of AC 220V. Signals are fed by a colour bar signal generator for servicing purpose.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted. (K = kΩ = 1000 Ω, M = MΩ).
2. All resistorsare ±10%, unless otherwise noted. (J = ± 5%)
3. All resistors are 1/8W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.
   - Ⓒ: Solid
   - Ⓦ: Cement
   - Ⓢ: Oxide Film
   - Ⓣ: Special
   - Ⓝ: Metal Coating

CAPACITOR

1. All capacitors are μF, unless otherwise noted. (P = pF = μμF).
2. All capacitios are 50V, unless otherwise noted.
3. All capacitios are Ceramic type, unless otherwise noted.
   - (ML): Mylar
   - (TA): Tantalum
   - (PF): Polypro Film
   - (ST): Styrol

BESCHREIBUNG DES SCHEMATISCHEN SCHALTPLANS

SPANNUNGSMESSUNGEN:

1. Spannungen an den Prüfpunkten werden bei einer Netzspannung von 220 V gemessen, Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt, und Spannungen werden mit einem Meßinstrument (20 kΩ/V) ermittelt.

SIGNALFORMMESSUNGEN:

1. Die Wellenformen an den Testpunkten werden bei einer Netzspannung von 220 V verfolgt. Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt.

BEZEICHNUNG DES WIDERSTANDS UND KONDENSATORS:

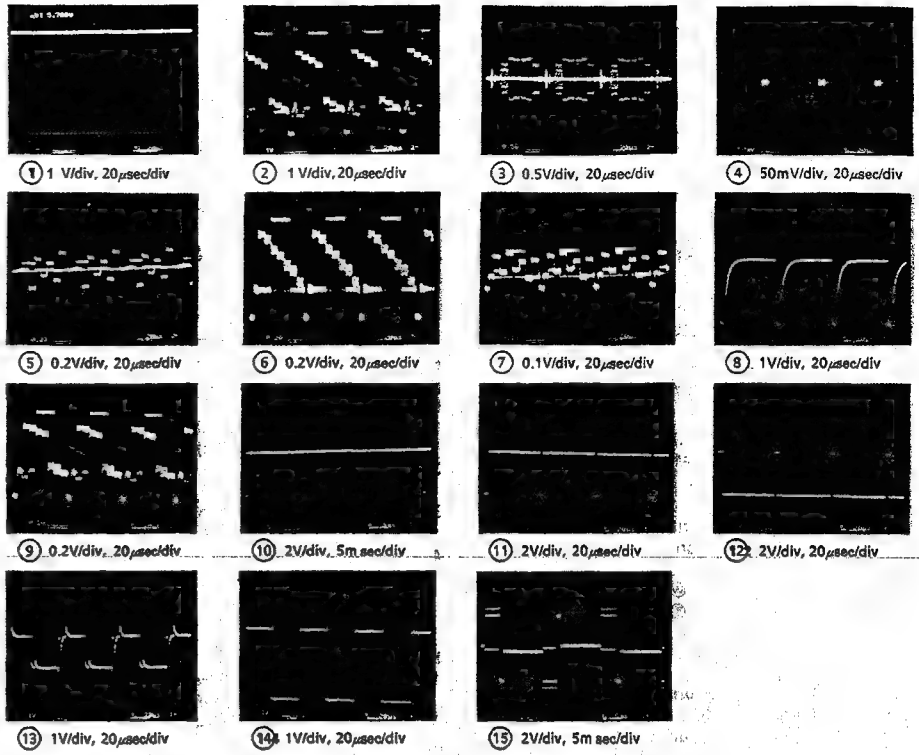
WIDERSTAND

1. Die Widerstandseinheit "Ω" wird weggelassen. (K = kΩ = 1000 Ω, M = MΩ).
2. Alle Widerstande haben ± 10%, sofern nicht anders angegeben. (J = ± 5%)
3. Alle Widerstände haben 1/8W, sofern nicht anders angegeben.
4. Alle Widerstande sind Kohletyp, sofern nicht anders angegeben.
   - Ⓒ: Fest
   - Ⓦ: Zement
   - Ⓢ: Oxidfilm
   - Ⓣ: Spezial
   - Ⓝ: Metallüberzug

KONDENSATOR

1. Die Kapazitatseinheit ist μF, sofern nicht anders angegeben. (P = pF = μμF).
2. Alle Kondensatoren haben 50V, sofern nicht anders angegeben.
3. Alle Kondensatoren sind Keramiktyp, sofern nicht anders angegeben.
   - (ML): Mylar
   - (TA): Tantal
   - (PF): Polyprofilm
   - (ST): Styrol

CAUTION: **This circuit diagram is original one, therefore there may be a slight difference from yours.**	**ACHTUNG:** **bei diesem Schaltplan handelt es sich um den ursprünglichen. Esönnen daher geringfügige Unterschiede zu dem Ihrem bestehen.**
SAFETY NOTE: ***1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.*** ***2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.***	***SICHERHEITSANMERKUNGEN:*** ***1. VOR DEM AUSWECHSELN VON TEILEN MUSS UNBEDINGT NETZSTECKERAUS DER NETZSTECKDOSE GEZOGEN WERDEN.*** ***2. DIE WARMEABLEITER DER HALBLEITER SOLLTEN BEIM BETRIEB DES CHASSIS ALS MÖGLICHE URSACHEN VON GEFÄHRLICHEN ELEKTRISCHEN SCHLÄGEN BETRACHTET WERDEN.***
IMPORTANT SAFETY NOTICE: ***PARTS MARKED WITH "⚠" ([redacted]) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFOMANCE OF THE SET.***	***WICHTIGE SICHERHEITSANMERKUNGEN:*** ***MIT "⚠" ([redacted]) BEZEICHNETEN TEILE SIND BESONDERS WICHTIG FÜR DIE AUFRECHTERHALTUNG DER SICHERHEIT. BEIM WECHDIESER TEILE SOLLTEN DIE VORGESCHRIEBENEN TEILE IMMER VERWENDET WERDEN, UM SOWOHL DIE SICHERHEIT ALS AUCH DIE LEISTUNG DES GERÄTES AUFRECHTZUERHALTEN.***

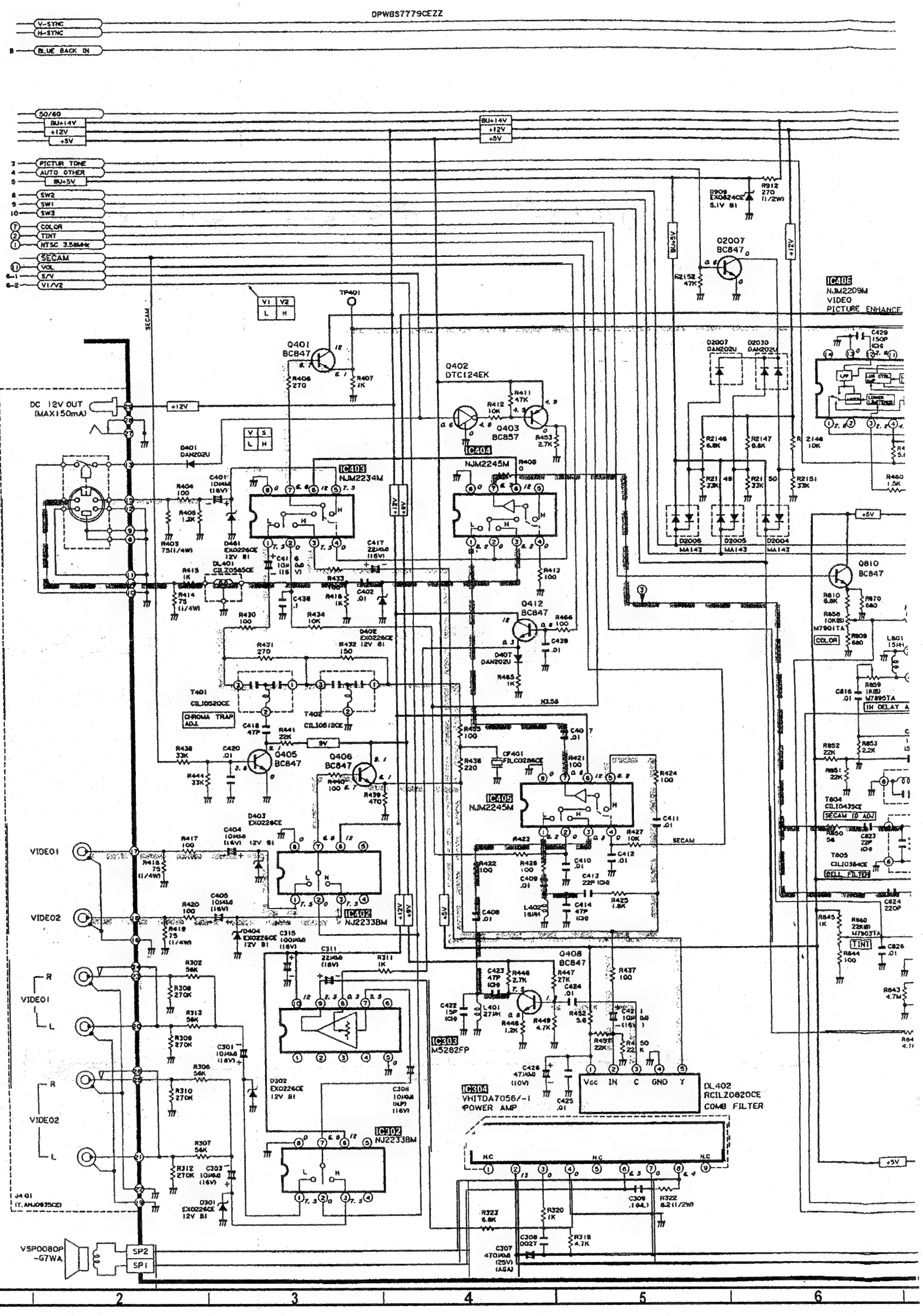


① 1 V/div, 20μsec/div
② 1 V/div, 20μsec/div
③ 0.5V/div, 20μsec/div
④ 50mV/div, 20μsec/div
⑤ 0.2V/div, 20μsec/div
⑥ 0.2V/div, 20μsec/div
⑦ 0.1V/div, 20μsec/div
⑧ 1V/div, 20μsec/div
⑨ 0.2V/div, 20μsec/div
⑩ 2V/div, 5m sec/div
⑪ 2V/div, 20μsec/div
⑫ 2V/div, 20μsec/div
⑬ 1V/div, 20μsec/div
⑭ 1V/div, 20μsec/div
⑮ 2V/div, 5m sec/div

MAIN UNIT-1 / HAUPT-EINHEIT-1

Video signal/Videosignal

R signal



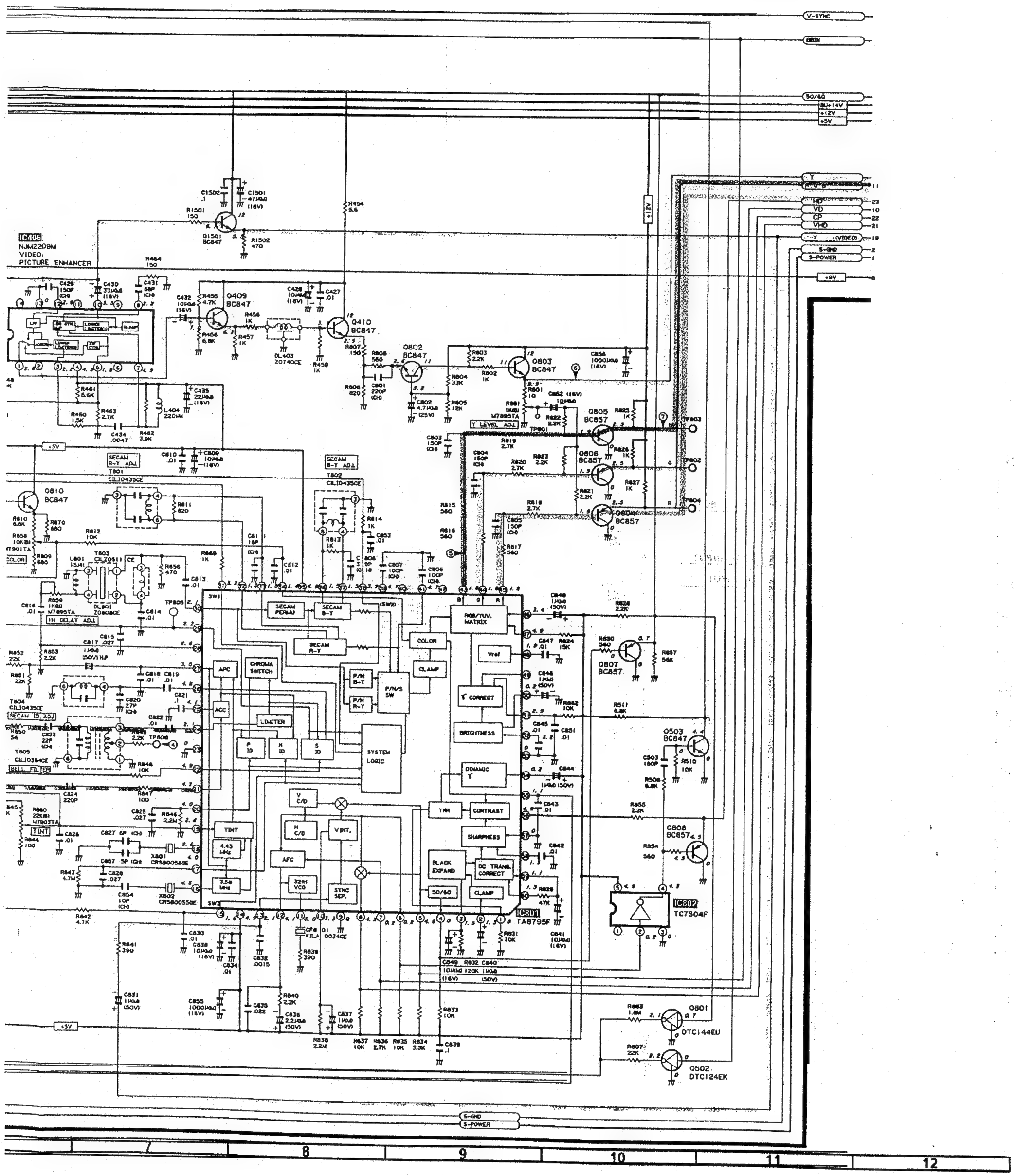
al

Luminance Signal/Luminanzsignal

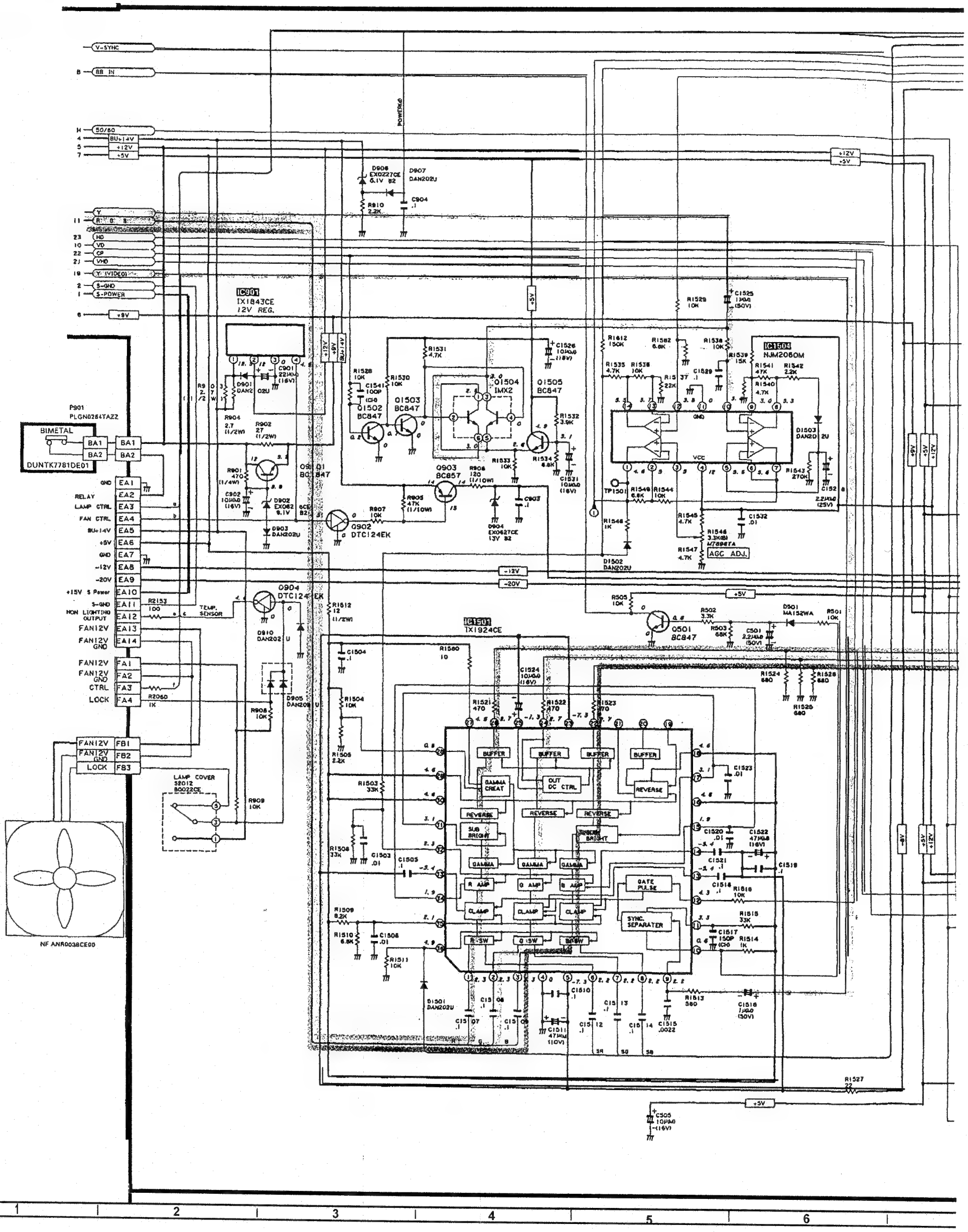
G signal

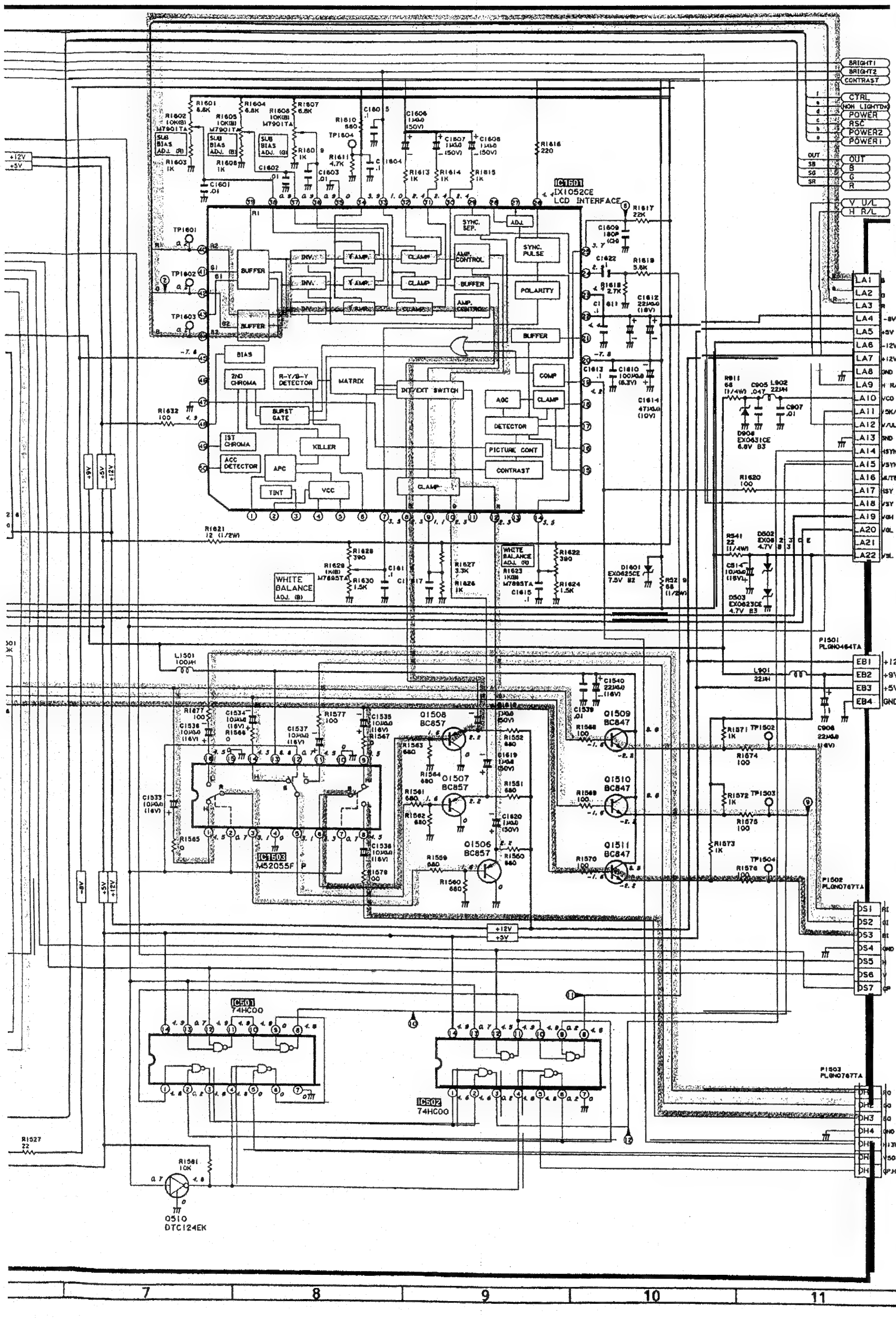
Chrominance Signal/Chrominanzsignal

B signal

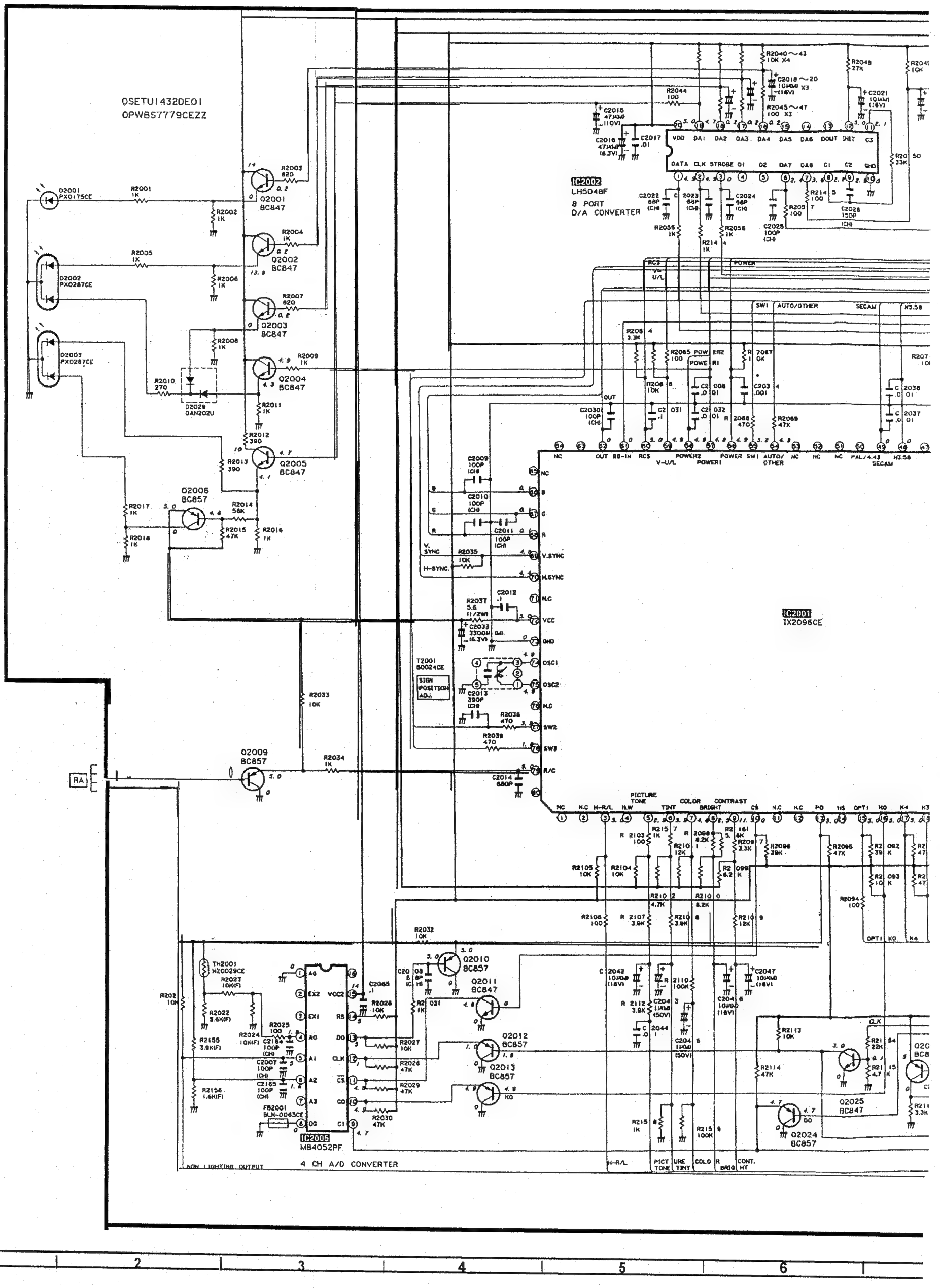


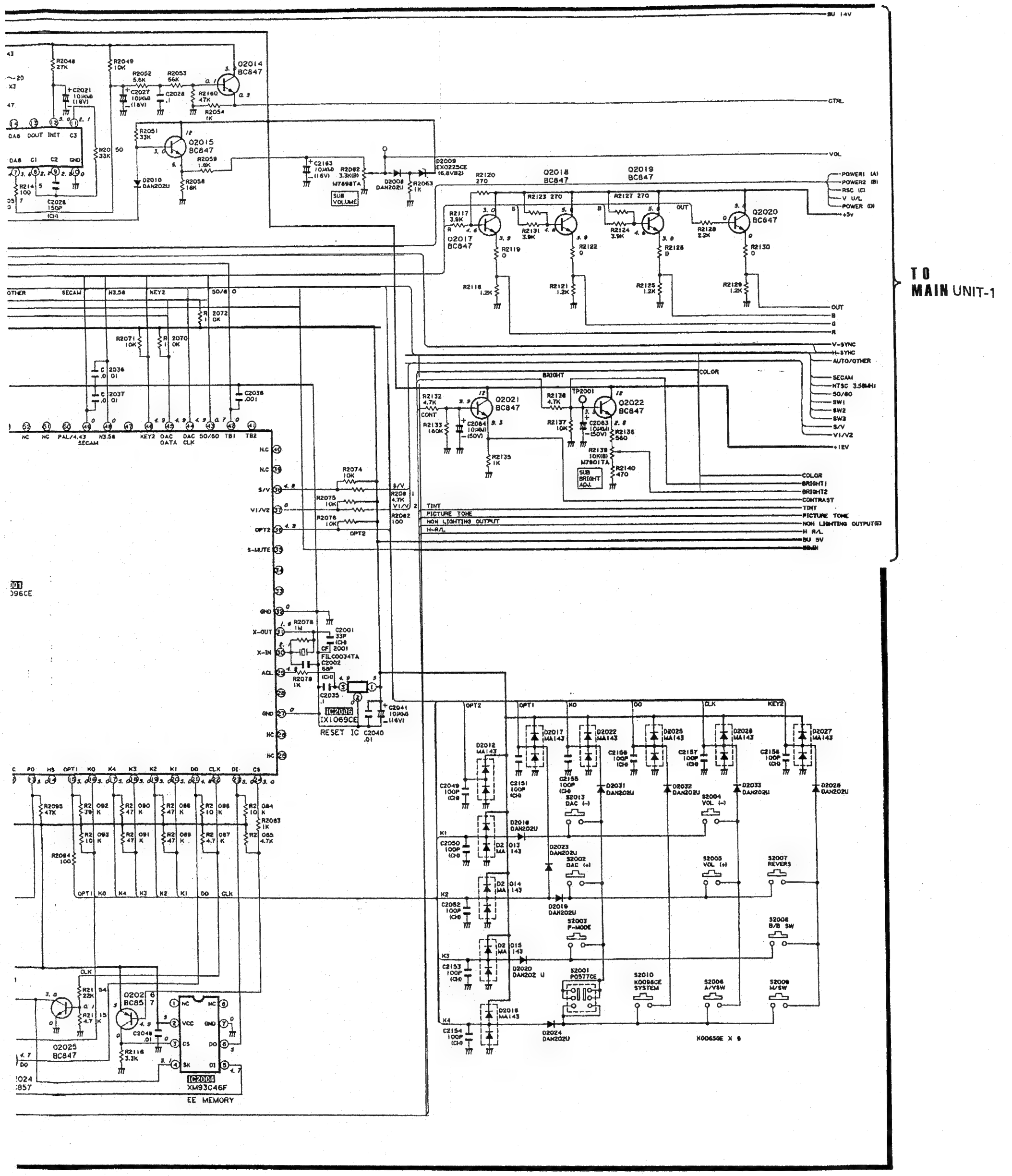
MAIN UNIT-2 / HAUPT-EINHEIT-2




IC1601
IX1052CE
LCD INTERFACE
BRIGHT1
BRIGHT2
CONTRAST
CTRL
NON LIGHTDN
POWER
RSC
POWER2
POWER1
OUT
SB
SG
SR
OUT
B
G
R
V U/L
H R/L
LA1
LA2
LA3
LA4 -8V
LA5 +5V
LA6 +12V
LA7 +12V
LA8 GND
LA9 H R/L
LA10 VCO
LA11 H5K/13K
LA12 V/UL
LA13 GND
LA14 HSYN
LA15 VSYN
LA16 H/TE
LA17 HSY
LA18 VSY
LA19 VGH
LA20 VGL
LA21
LA22 VSL
BUFFER
INV.
Y AMP.
CLAMP
SYNC. SEP.
ADJ.
SYNC. PULSE
AMP. CONTROL
POLARITY
BIAS
2ND CHROMA
R-Y/B-Y DETECTOR
MATRIX
INPUT SWITCH
COMP
AGC
BURST GATE
DETECTOR
1ST CHROMA
KILLER
PICTURE CONT
ACC DETECTOR
APC
CONTRAST
TINT
VCC
WHITE BALANCE ADJ. (B)
WHITE BALANCE ADJ. (R)
D1601 EX0625CE 7.5V B2
D502 EX06 4.7V B3
D503 EX0623CE 4.7V B3
D904 EX0631CE 6.8V B3
P1501 PLGN0464TA
EB1 +12V
EB2 +9V
EB3 +5V
EB4 GND
P1502 PLGN0767TA
DS1
DS2
DS3
DS4 GND
DS5 H
DS6 V
DS7 GP
P1503 PLGN0767TA
DH1 RD
DH2 GD
DH3 BD
DH4 GND
DH5 H13K
DH6 VSD
DH7 GPH
IC501 M52055F P
IC502 74HC00
IC503 74HC00
Q1506 BC857
Q1507 BC857
Q1508 BC857
Q1509 BC847
Q1510 BC847
Q1511 BC847
Q0510 DTC124EK
+12V
+9V
+5V
-8V
GND

MAIN UNIT-3 / HAUPT-EINHEIT-3




TO MAIN UNIT-1
BU 14V
CTRL
VOL
POWER1 (A)
POWER2 (B)
RSC (C)
V U/L
POWER (D)
+5V
OUT
B
G
R
V-SYNC
H-SYNC
AUTO/OTHER
SECAM
NTSC 3.58MHz
50/60
SW1
SW2
SW3
S/V
V1/V2
+12V
COLOR
BRIGHT1
BRIGHT2
CONTRAST
TINT
PICTURE TONE
NON LIGHTING OUTPUT(D)
H R/L
BU 5V
BU GN
02014 BC847
02015 BC847
02016 DAN202U
02017 BC847
02018 BC847
02019 BC847
02020 BC847
02021 BC847
02022 BC847
02025 BC847
M7898TA
SUB VOLUME
D2009 EXO225CE 16.8V82
DAN202U
M78017A
SUB BRIGHT ADJ.
IC2006 IX1069CE RESET IC
IC2004 XM93C46F EE MEMORY
FIL00034TA
S2001 P0577CE
S2002 DAC (+)
S2003 P-MODE
S2004 VOL (-)
S2005 VOL (+)
S2006 A/V SW
S2007 REVERS
S2008 B/B SW
S2009 M/SW
S2010 K0098CE SYSTEM
K00650E X 8
OTHER
SECAM
N3.58
KEY2
50/60
NC
PAL/4.43 SECAM
DAC DATA
DAC CLK
TB1
TB2
S/V
V1/V2
OPT2
S-MUTE
X-OUT
X-IN
ACL
RESET IC
EE MEMORY

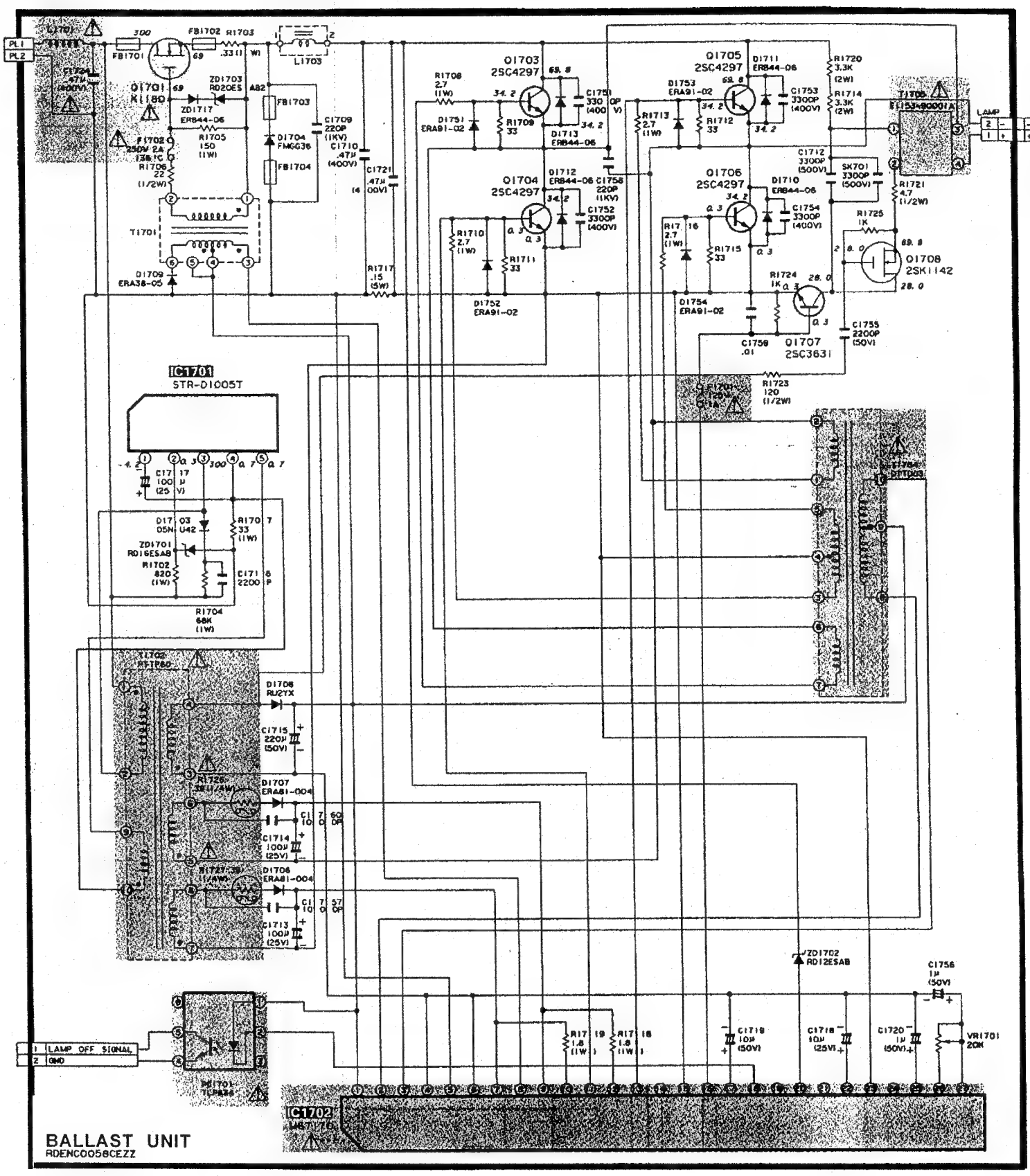
SUB UNIT / UNTER-EINHEIT

R signal G signal 8 signal

XV310P
SUB
DUNTK7780DE01
QPWBS7780CEZ

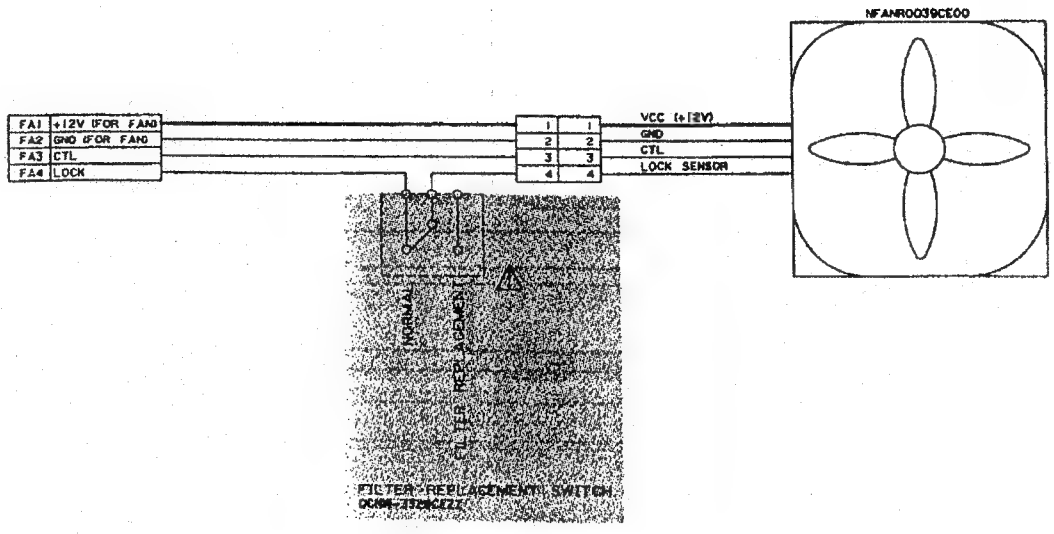
BALLAST UNIT / VORSCHALTGERÄT-EINHEIT

XV310P
SUB
DUNTK7780DE01
QPWBS7780CEZZ



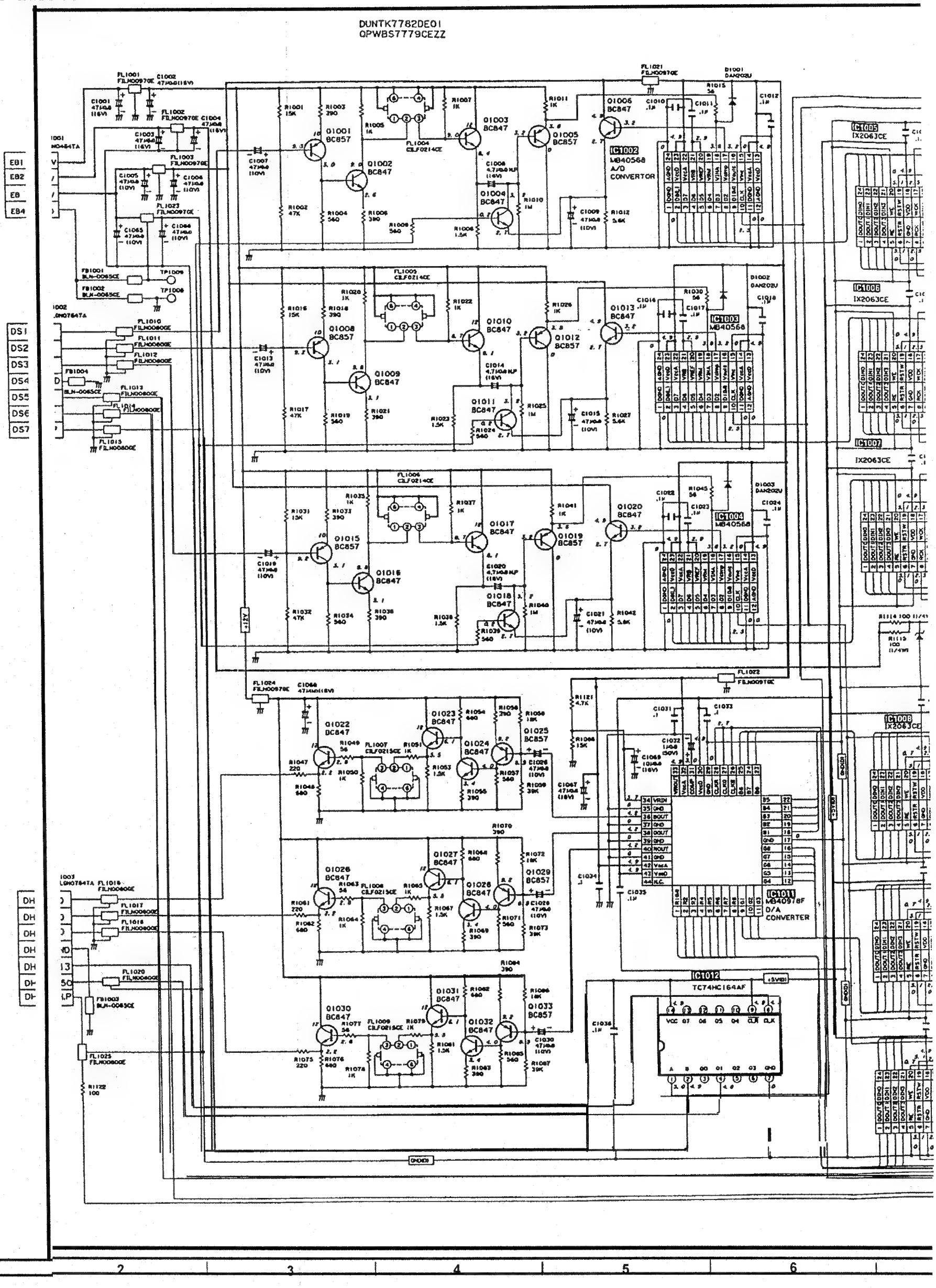
IC1702 PIN VOLTAGE

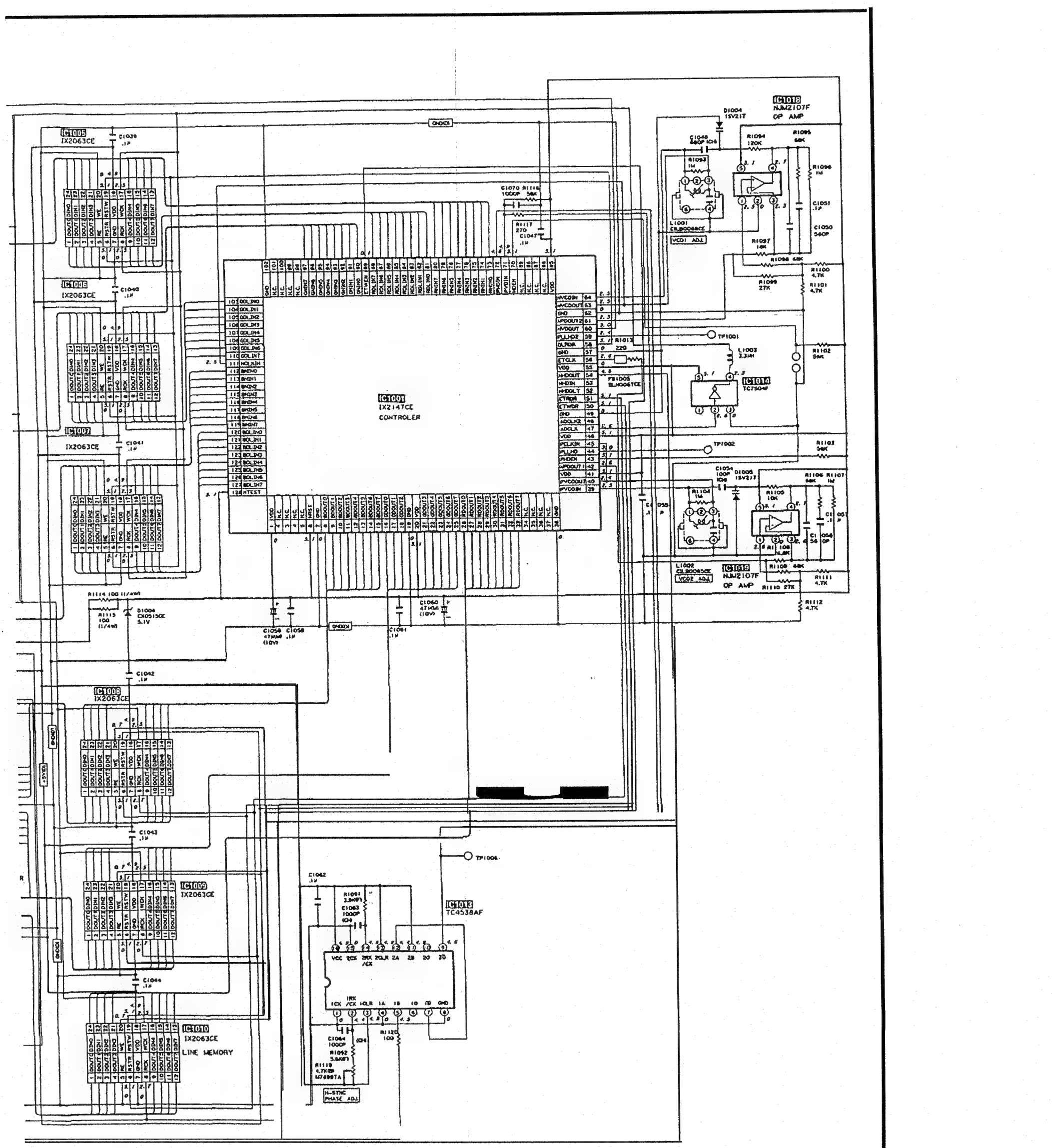
①	13.7	⑧	13.6	⑮	0.3	㉒	1.2
②	12.0	⑨	41.2	⑯	0.3	㉓	0.3
③	12.0	⑩	6.3	⑰	3.2	㉔	
④	0	⑪	8.3	⑱	15.0	㉕	0.7
⑤	0	⑫	41.1	⑲		㉖	0.3
⑥	0	⑬	35.4	⑳	59.1	㉗	2.7
⑦	6.3	⑭	0	㉑			



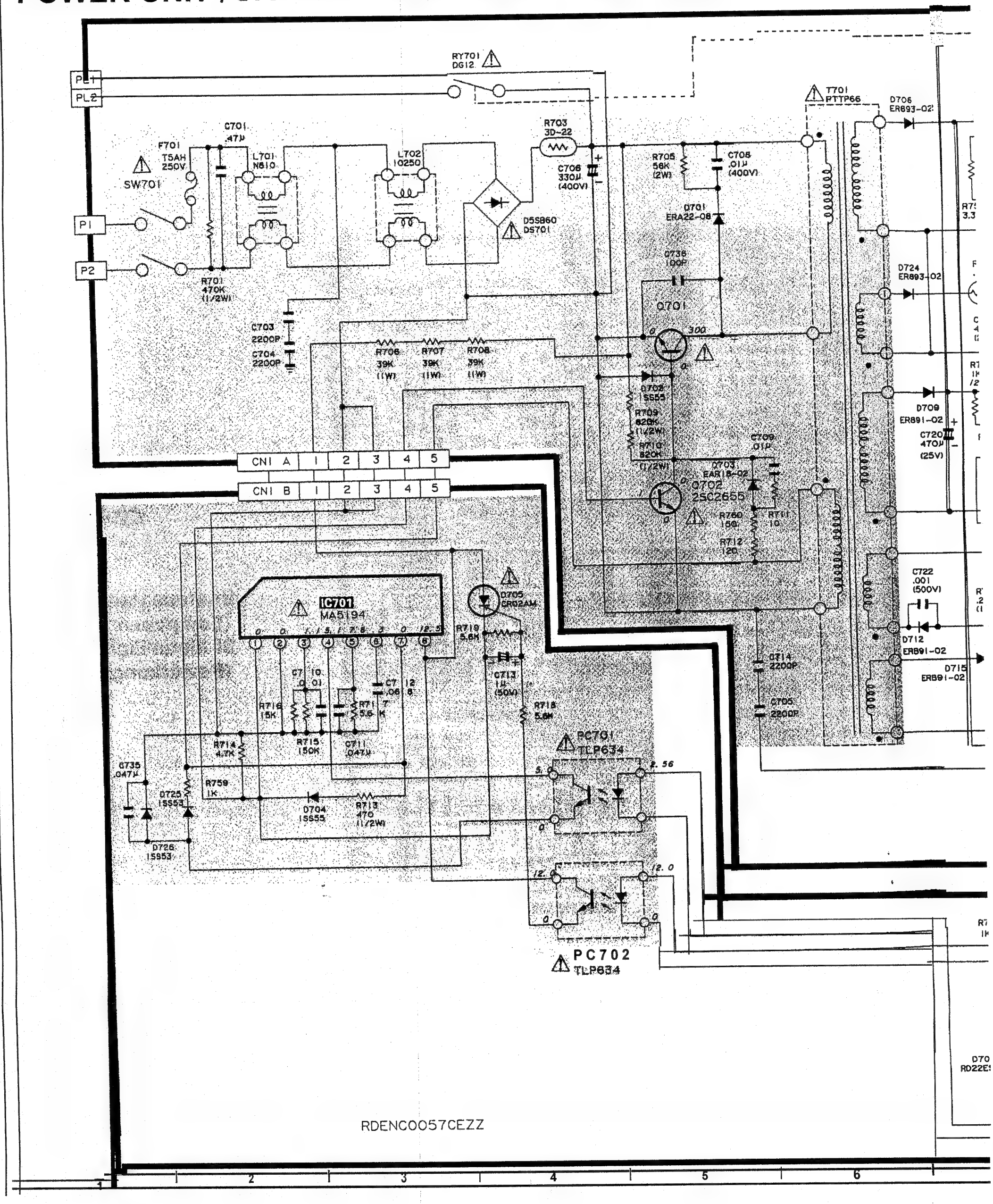
DIGITAL UNIT / DIGITAL-EINHEIT

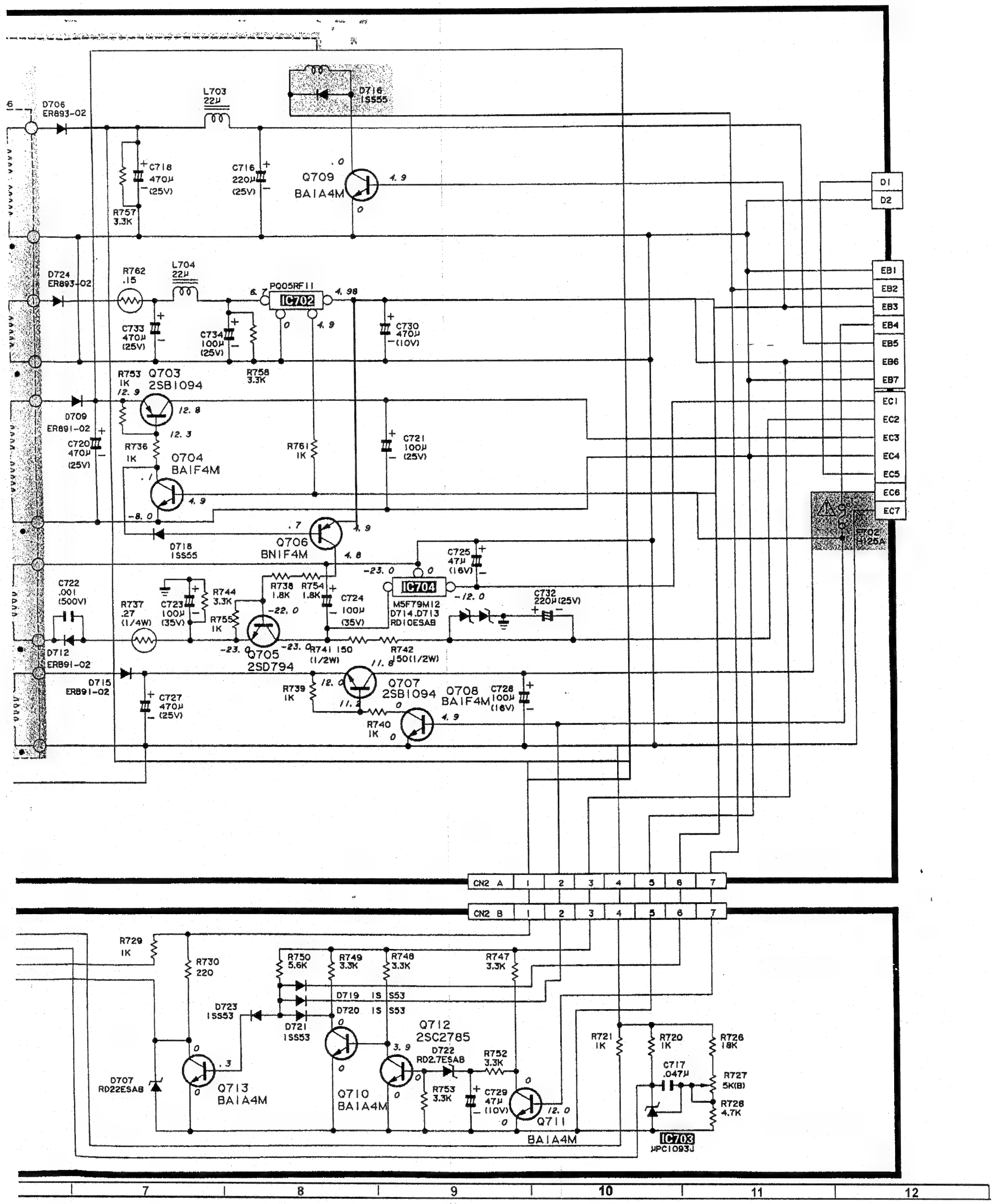
DUNTK7782DE01
QPWBS7779CEZZ



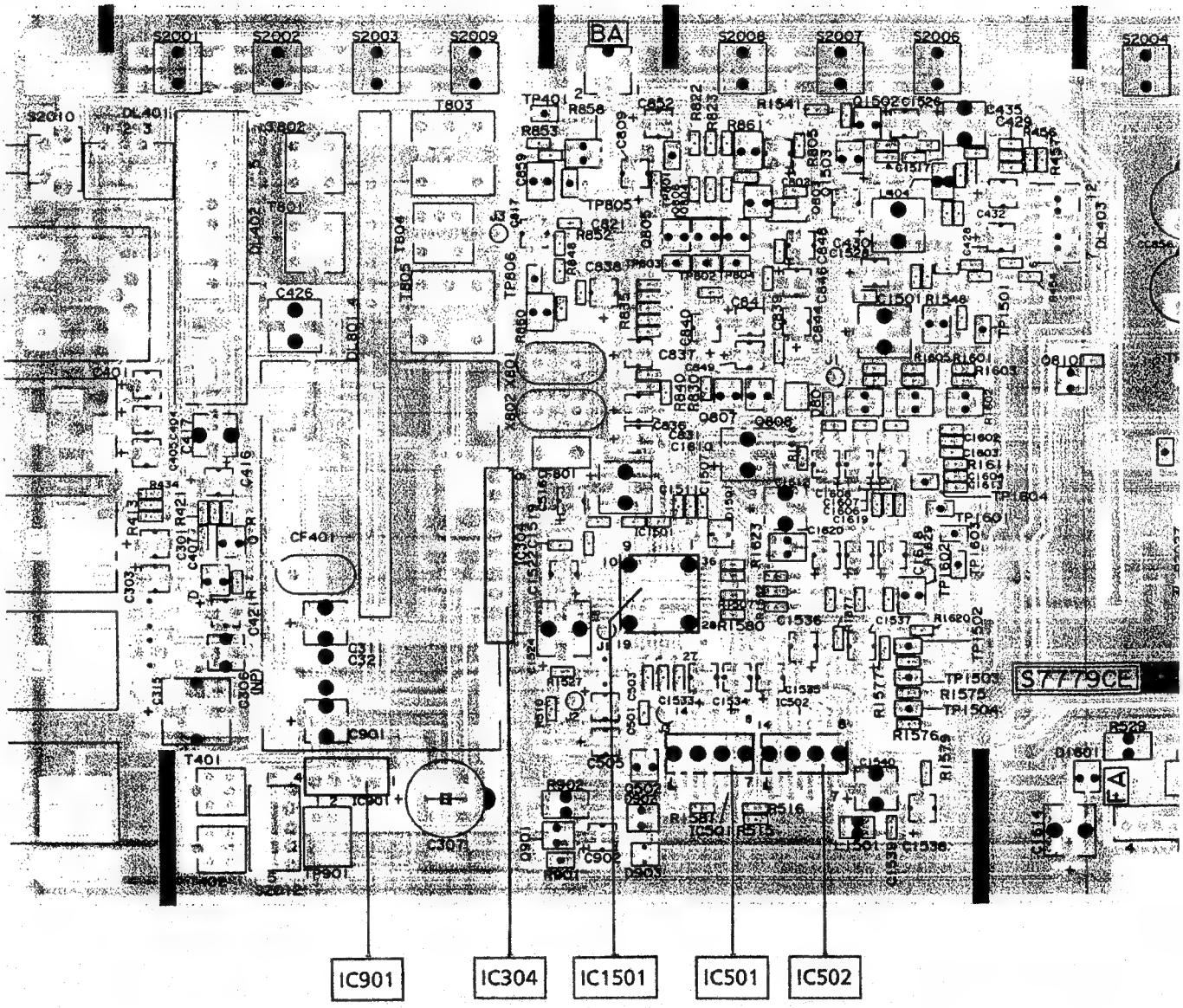

IC1001
IX2147CE
CONTROLER
IC1005
IX2063CE
IC1006
IX2063CE
IC1007
IX2063CE
IC1008
IX2063CE
IC1009
IX2063CE
IC1010
IX2063CE
LINE MEMORY
IC1011
TC4538AF
IC1012
NJM2107F
OP AMP
IC1013
NJM2107F
OP AMP
IC1014
TC7S04F
D1004
1SV217
D1005
1SV217
D1006
DX05I5CE
5.1V
L1001
CRL0004CE
L1002
CRL0004CE
L1003
3.3uH
VCO1 ADJ
VCO2 ADJ
TP1001
TP1002
TP1006
FB1005
BLM06TCE
H-SYNC
PHASE ADJ

POWER UNIT / SPANNUNGSVERSORGUNGS-EINHEIT

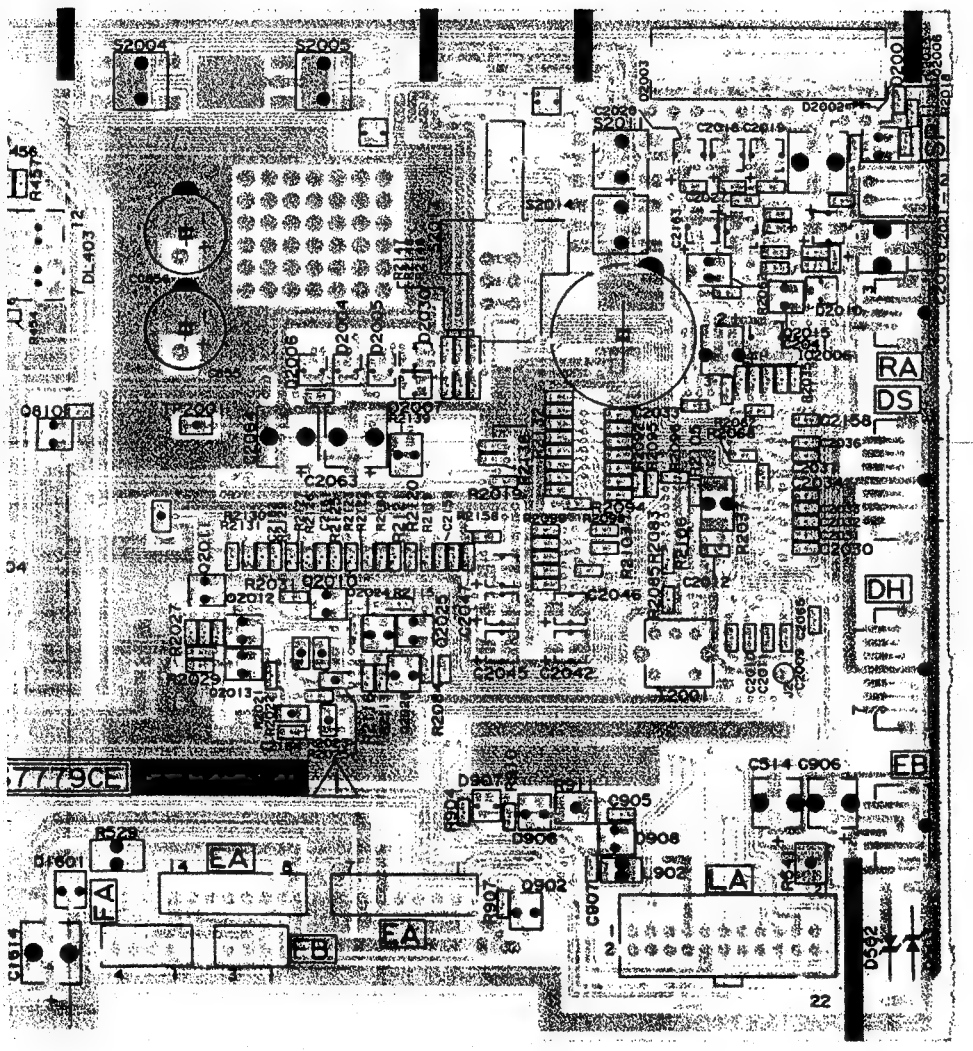


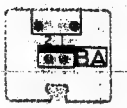

D706 ER893-02
L703 22μ
D716 1SS55
C718 470μ (25V)
C716 220μ (25V)
Q709 BA1A4M
R757 3.3K
D724 ER893-02
R762 .15
L704 22μ
P005RF11
IC702
C733 470μ (25V)
C734 100μ (25V)
C730 470μ (10V)
R753 1K
Q703 2SB1094
R758 3.3K
D709 ER891-02
C720 470μ (25V)
R736 1K
Q704 BA1F4M
R761 1K
C721 100μ (25V)
D718 1SS55
Q706 BN1F4M
C725 47μ (16V)
IC704
M5F79M12 D714.D713 RD10ESA8
C722 .001 (500V)
R737 .27 (1/4W)
C723 100μ (35V)
R744 3.3K
R755 1K
R738 1.8K
R754 1.8K
C724 100μ (35V)
C732 220μ (25V)
R741 150 (1/2W)
R742 150 (1/2W)
Q705 2SD794
D712 ER891-02
D715 ER891-02
C727 470μ (25V)
R739 1K
Q707 2SB1094
Q708 BA1F4M
C728 100μ (16V)
R740 1K
D1
D2
EB1
EB2
EB3
EB4
EB5
EB6
EB7
EC1
EC2
EC3
EC4
EC5
EC6
EC7
CN2 A
CN2 B
R729 1K
R730 220
R750 5.6K
R749 3.3K
R748 3.3K
R747 3.3K
D719 IS S53
D720 IS S53
D723 1SS53
D721 1SS53
Q712 2SC2785
D722 RD2.7ESA8
R752 3.3K
R753 3.3K
C729 47μ (10V)
Q711 BA1A4M
D707 RD22ESA8
Q713 BA1A4M
Q710 BA1A4M
R721 1K
R720 1K
R726 18K
C717 .047μ
R727 5K(B)
R728 4.7K
IC703 μPC1093J

PRINTED WIRING BOARD ASSEMBLIES / LEITERPLATTENEINHEITEN



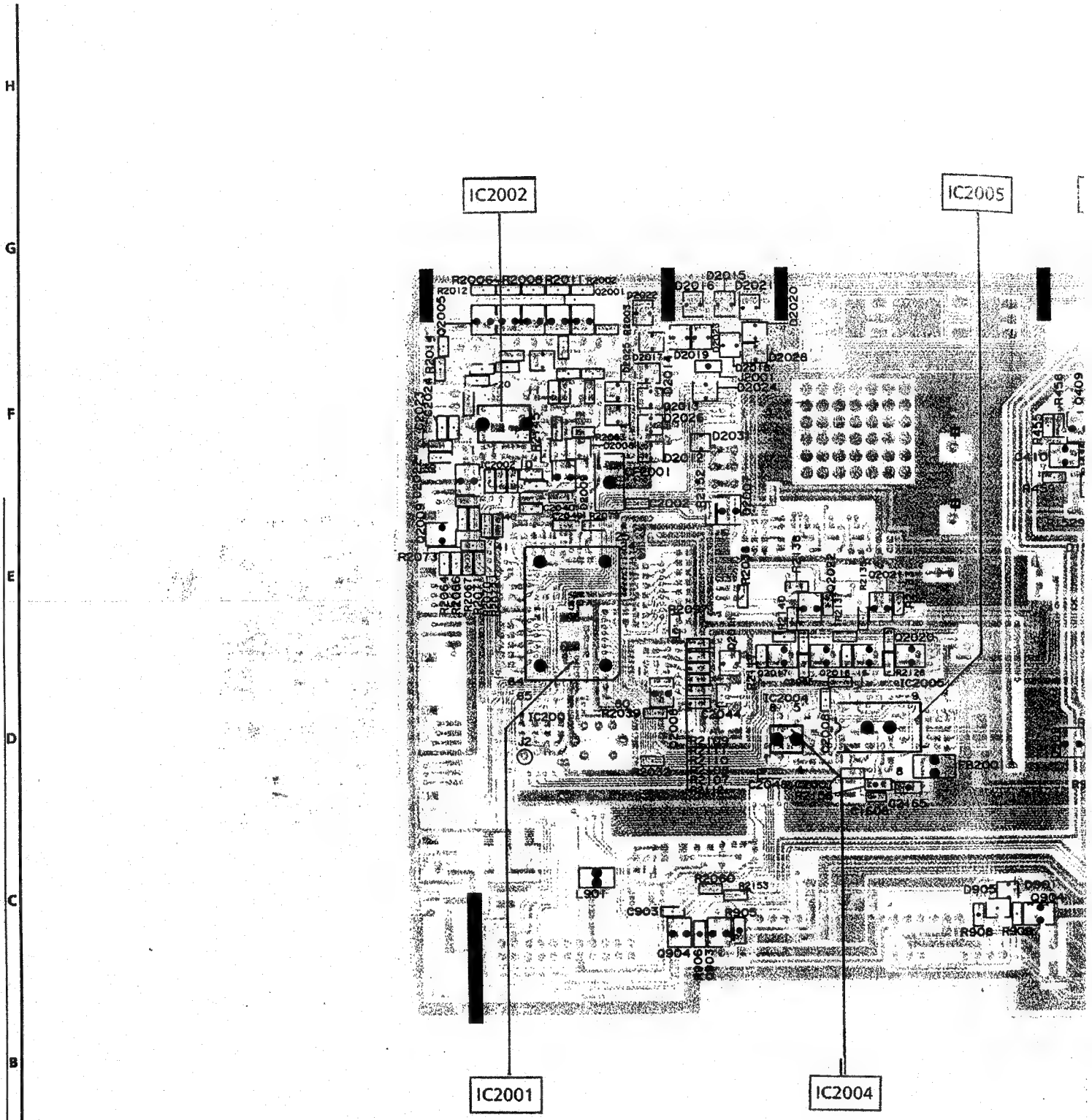
Main Unit (Component
Haupt-Einheit (Bestück



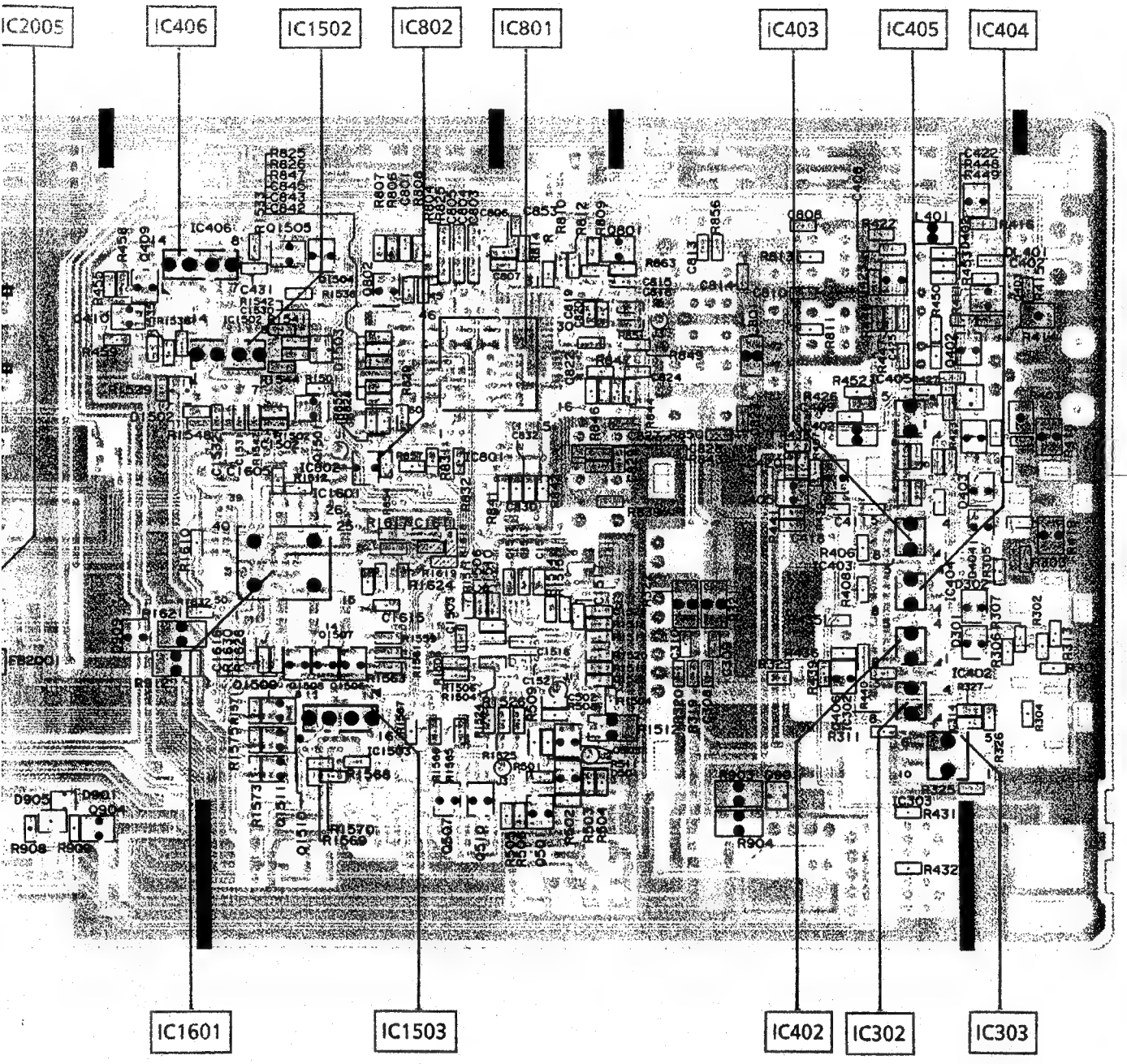


Bi-Metal Unit (Component Side) / Bi-Metal-Einheit (Bestückungsseite)

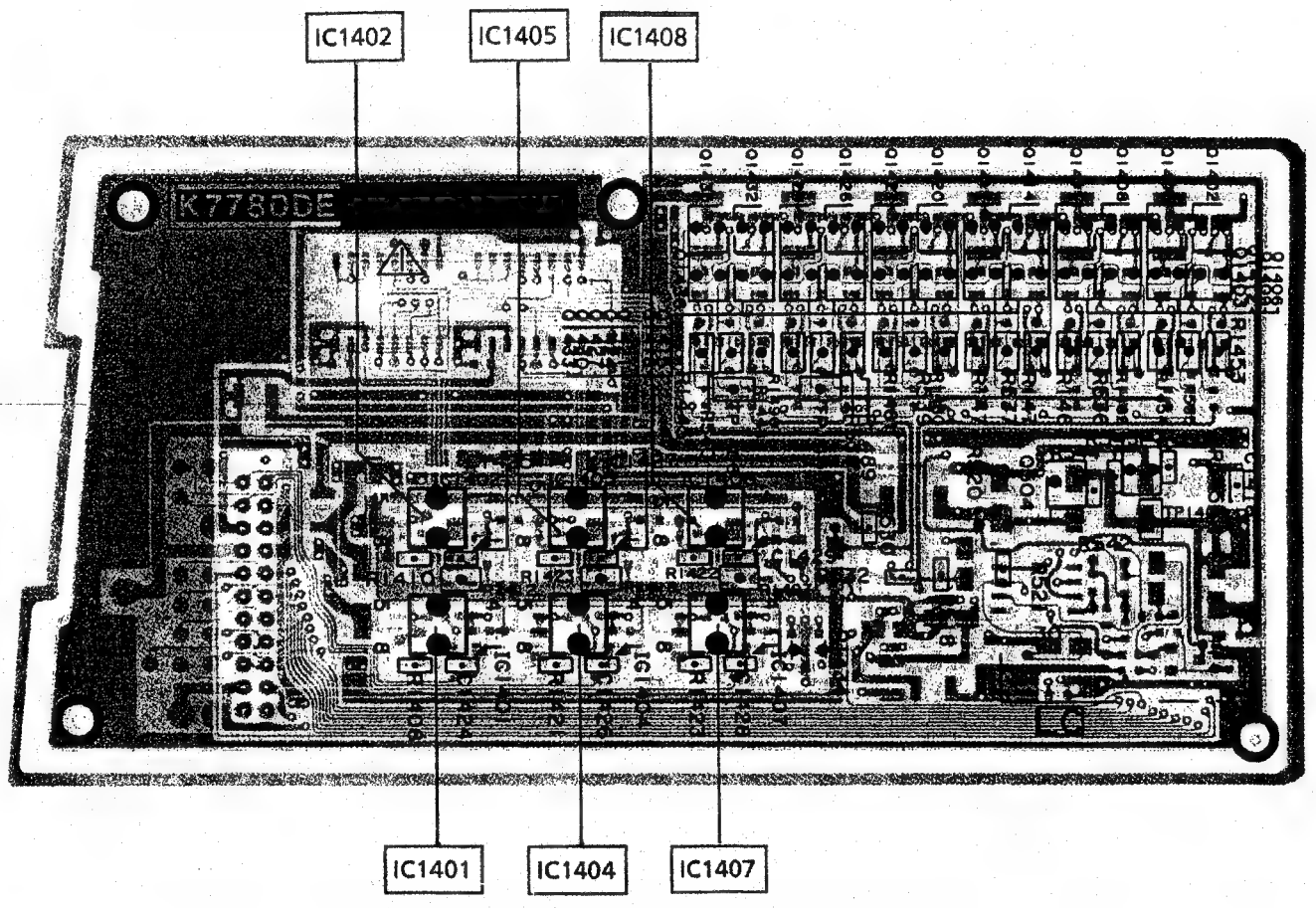
Component Side) / eit (Bestückungsseite)



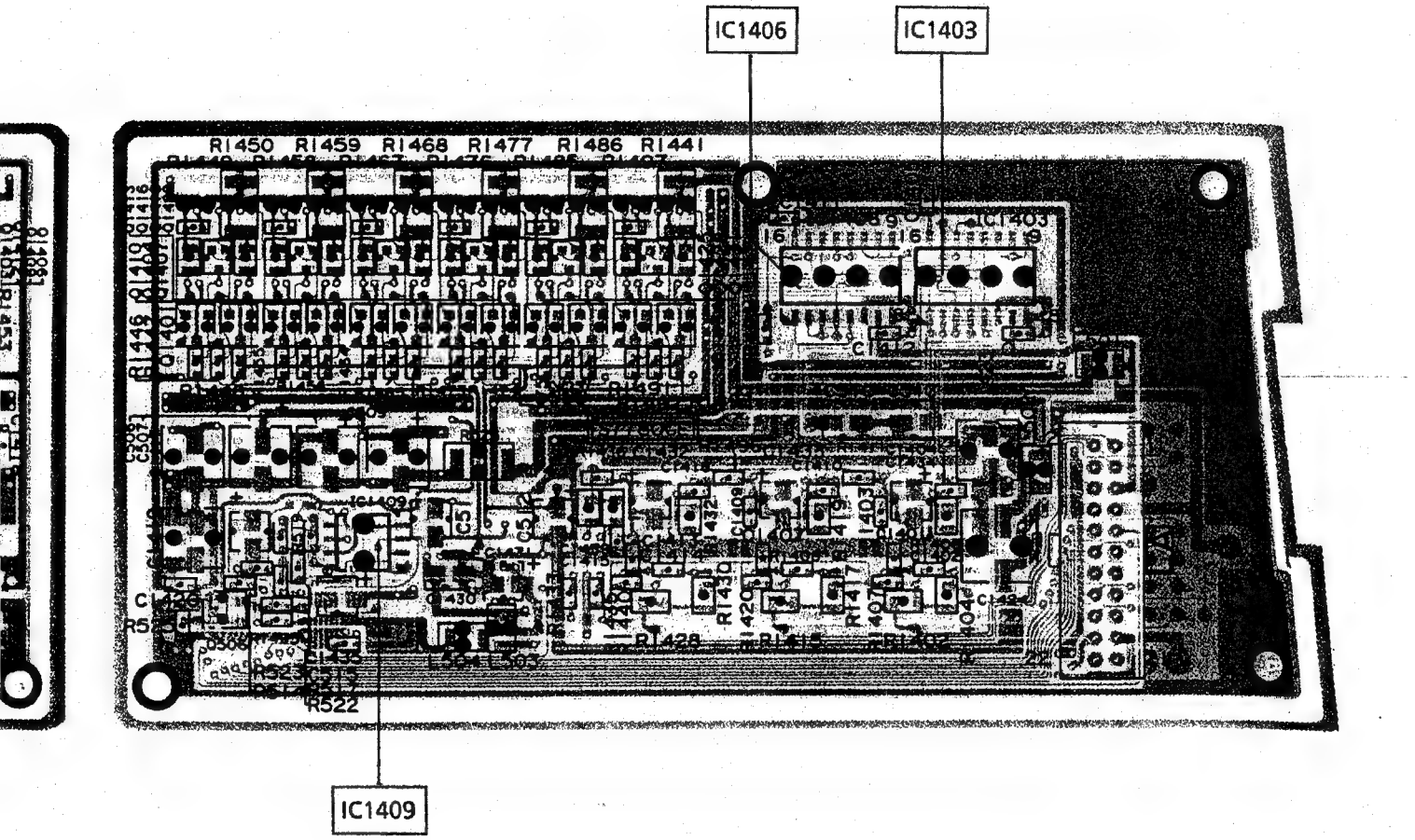
Main Unit (V
Haupt-Einh



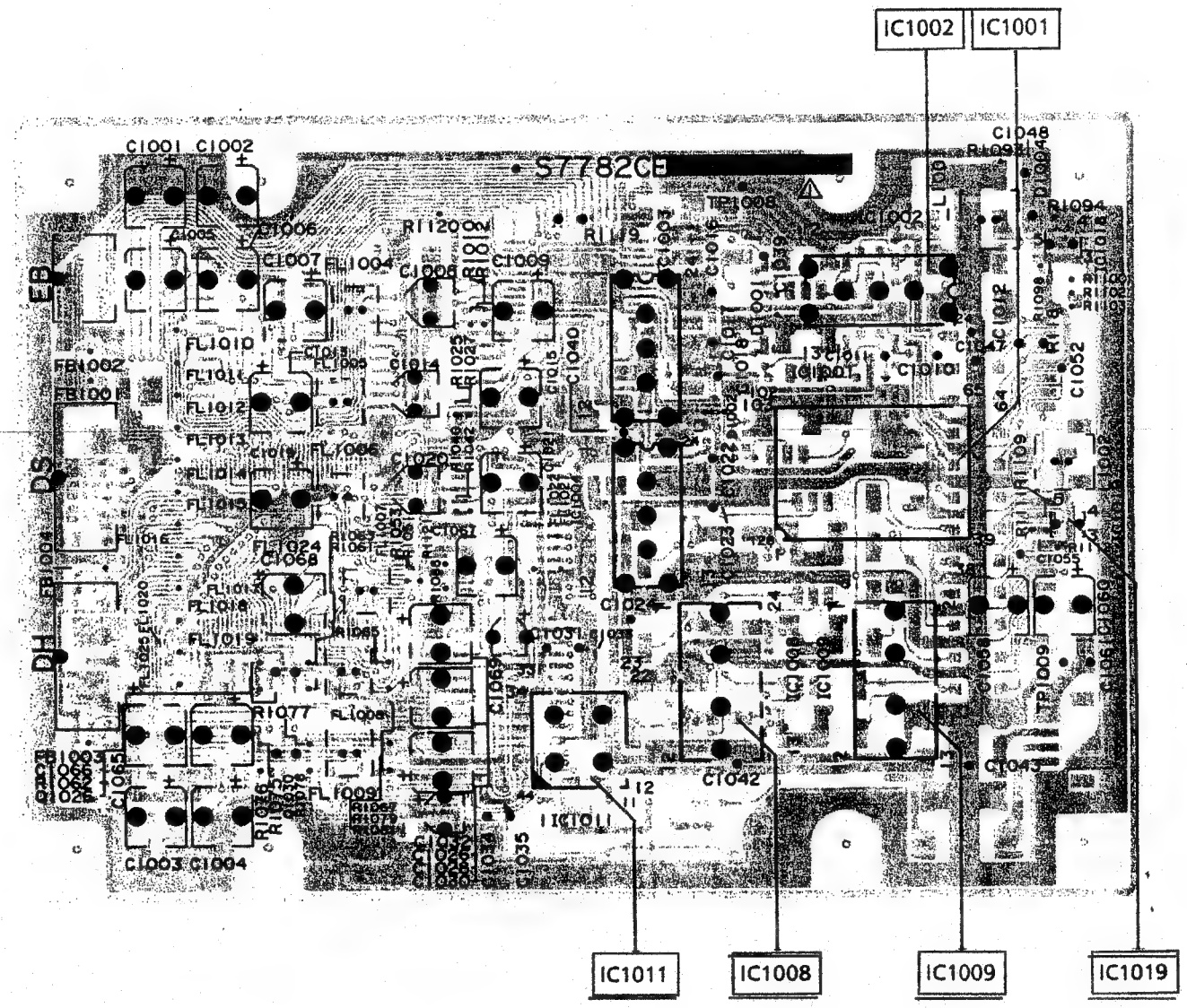
Main Unit (Wiring Side) /
Haupt-Einheit (Leiterbahnseite)



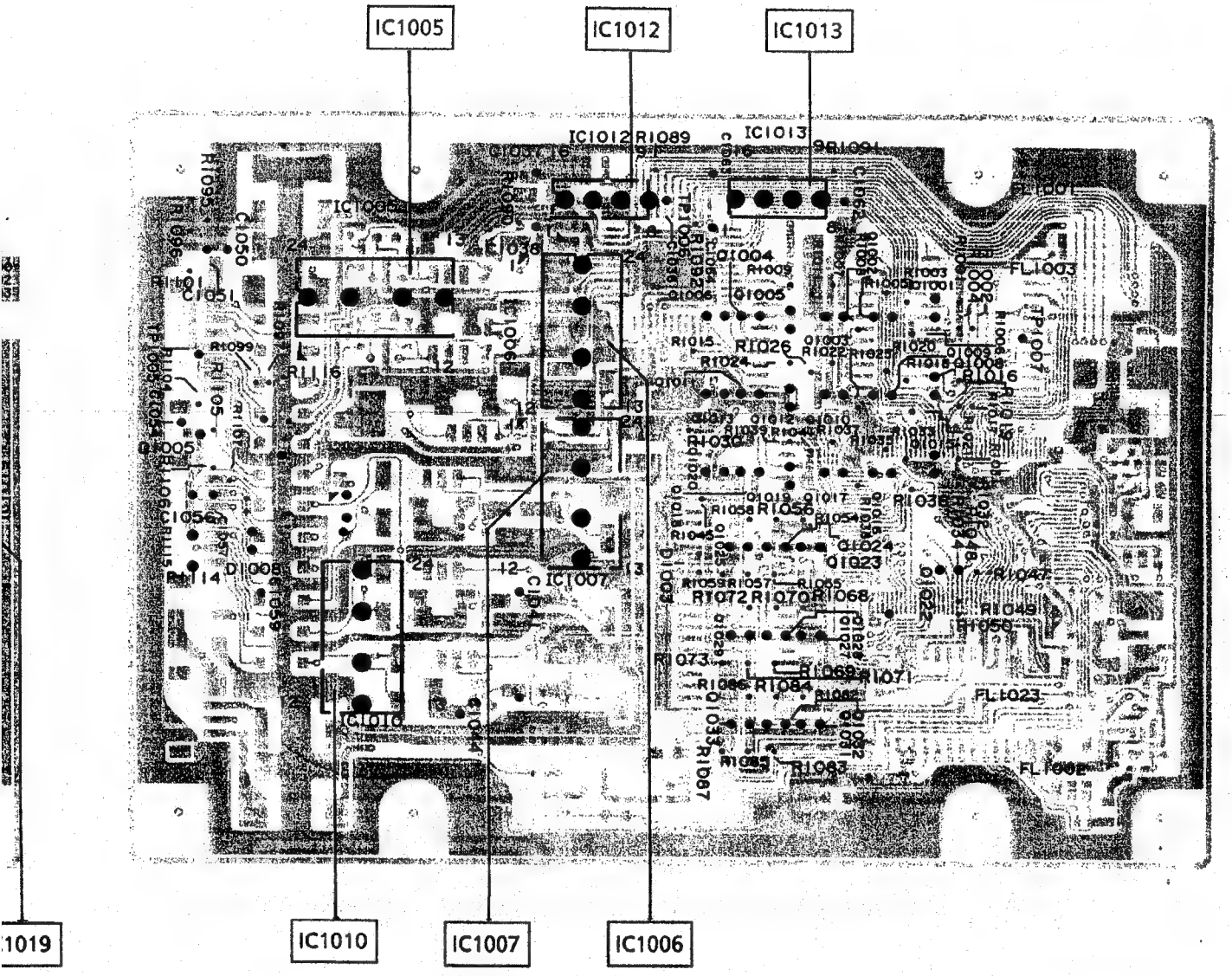
Sub Unit (Component Side) /
Unter-Einheit (Leiterbahnseite)



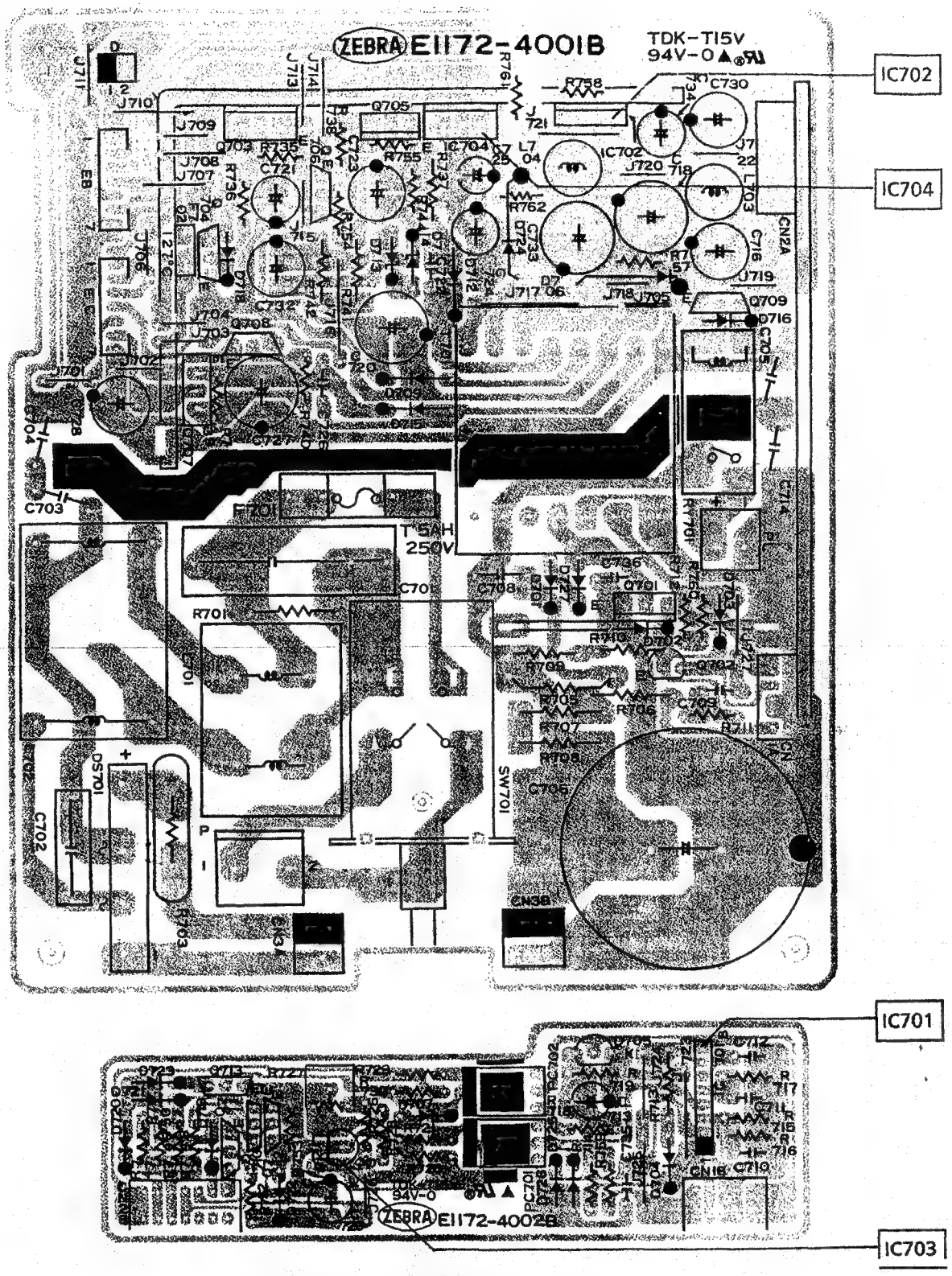
Sub Unit (Wiring Side) /
Unter-Einheit (Bestückungsseite)



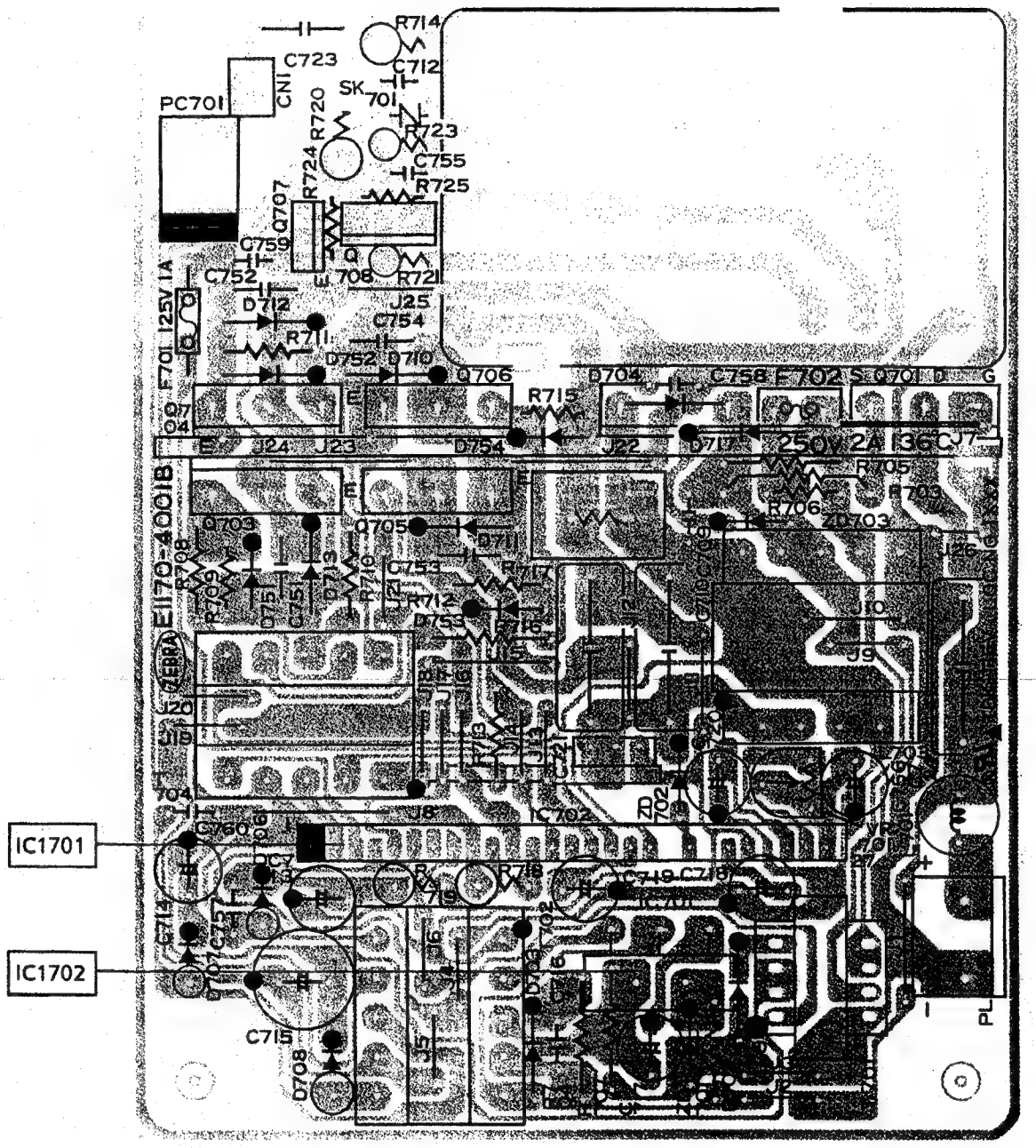
Digital Unit (Component Side) /
Digital-Einheit (Bestückungsseite)



Digital Unit (Wiring Side) /
Digial-Einheit (Leiterbahnseite)



Power Unit (Component Side) /
Spannungsversorgugs-Einheit
(Bestückungsseite)



Ballast Unit (Component Side) /
Vorschaltgerät-Einheit (Bestückungsseite)

NOTE:	NOTE:
The reference number of the **ballst** unit is of 4 digits of 1 ×× x. The numbering on the **PWB is given in 3 digits of 7 × ×.**	Die Bezugsnummern **für** die Ballasteinheit werden in **4stelligen** Nummern angegeben, **welche alle** mit einer 1 beginnen. Die Platinen sind mit **3stelligen** Nummern verhen, die mit 7 beginnen .

BLOCK DIAGRAM-1/ BLOCKSCHALTPLAN-1

MAIN UNIT

S-VHS IN

VIDEO IN 1

VIDEO IN 2

0401 BUFFER

IC403 Y SW

T401 SECAM TRAP

T402 PAL TRAP

0406 BUFFER

DL401 C-DL

IC402 VIDEO SW

DL402 COMB FILTER

IC405 Y SW

0408 BAND PASS

IC404 CHROMA SW

IC1504 AGC

IC406 PICTURE TONE CONT

0409 BUFFER

DL403 Y-DL

0410 BUFFER

0802 AMP

0810 BUFFER

R856 COLOR ADJ.

SECAM PEDESTAL

SECAM B-Y

SECAM R-Y

COLOR

CLAMP

APC

CHROMA SWITCH

P/N B-Y

P/N R-Y

P/N/S SW

T804 SECAM ID

ACC

LIMITER

T804 BELL

P ID

N ID

S ID

SYSTEM LOGIC

V C/D

H C/D

V BNT.

TINT

4.43 MHz

AFC

3.58 MHz

32fH VCO

SYNC SEP.

R860 TINT. ADJ.

IC801 CHROMA

V SYNC

H SYNC

BRIGHT

CONTRAST

COLOR

TINT

PICTUR TONE

SW 1

SW 2

SW 3

NTSC 3.58M

SECAM

V1/V2

VOL

R

L

AUDIO IN

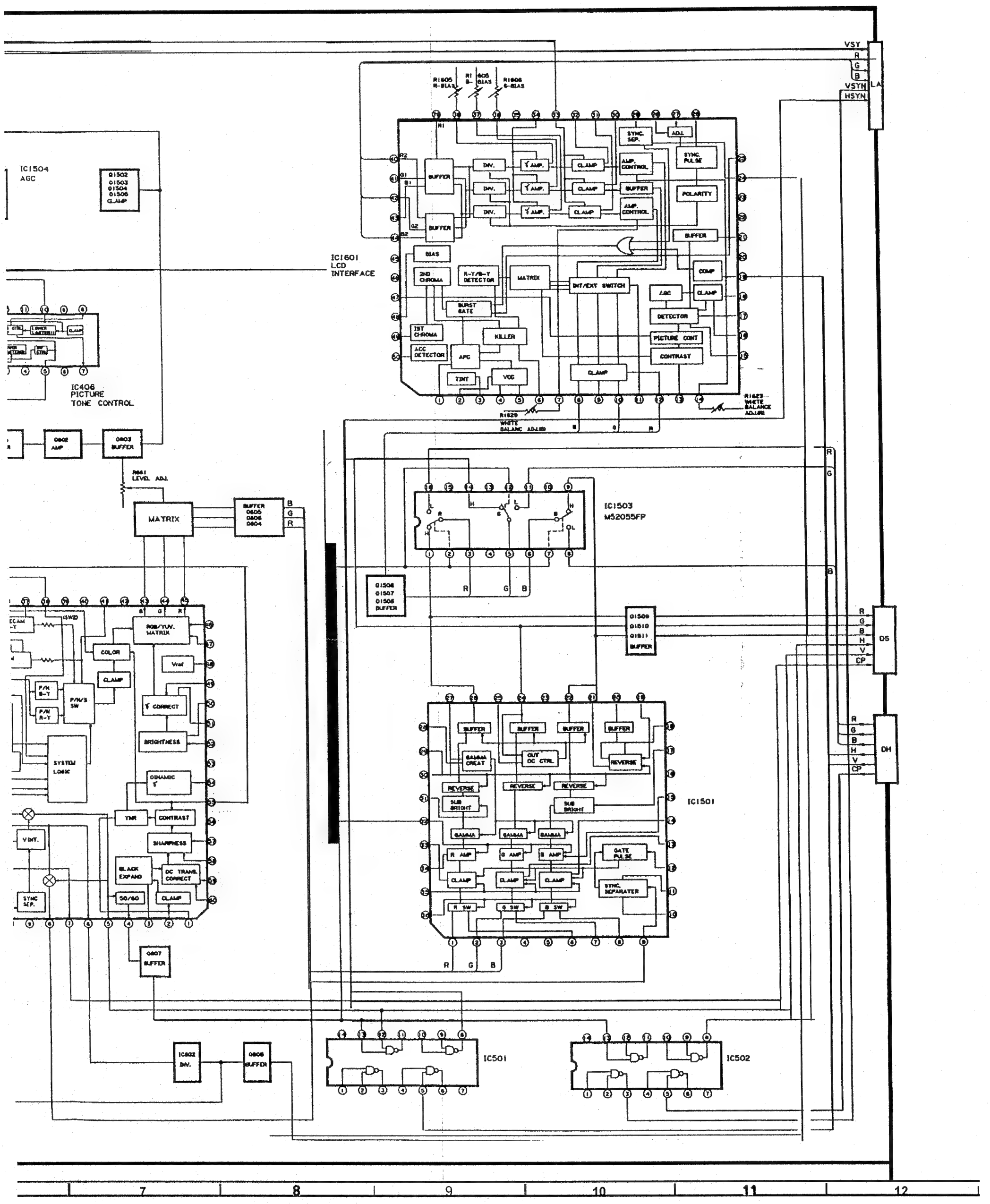
IC302 AUDIO SW

IC303 SOUND CONTROL

IC304 POWER AMP.

N.C

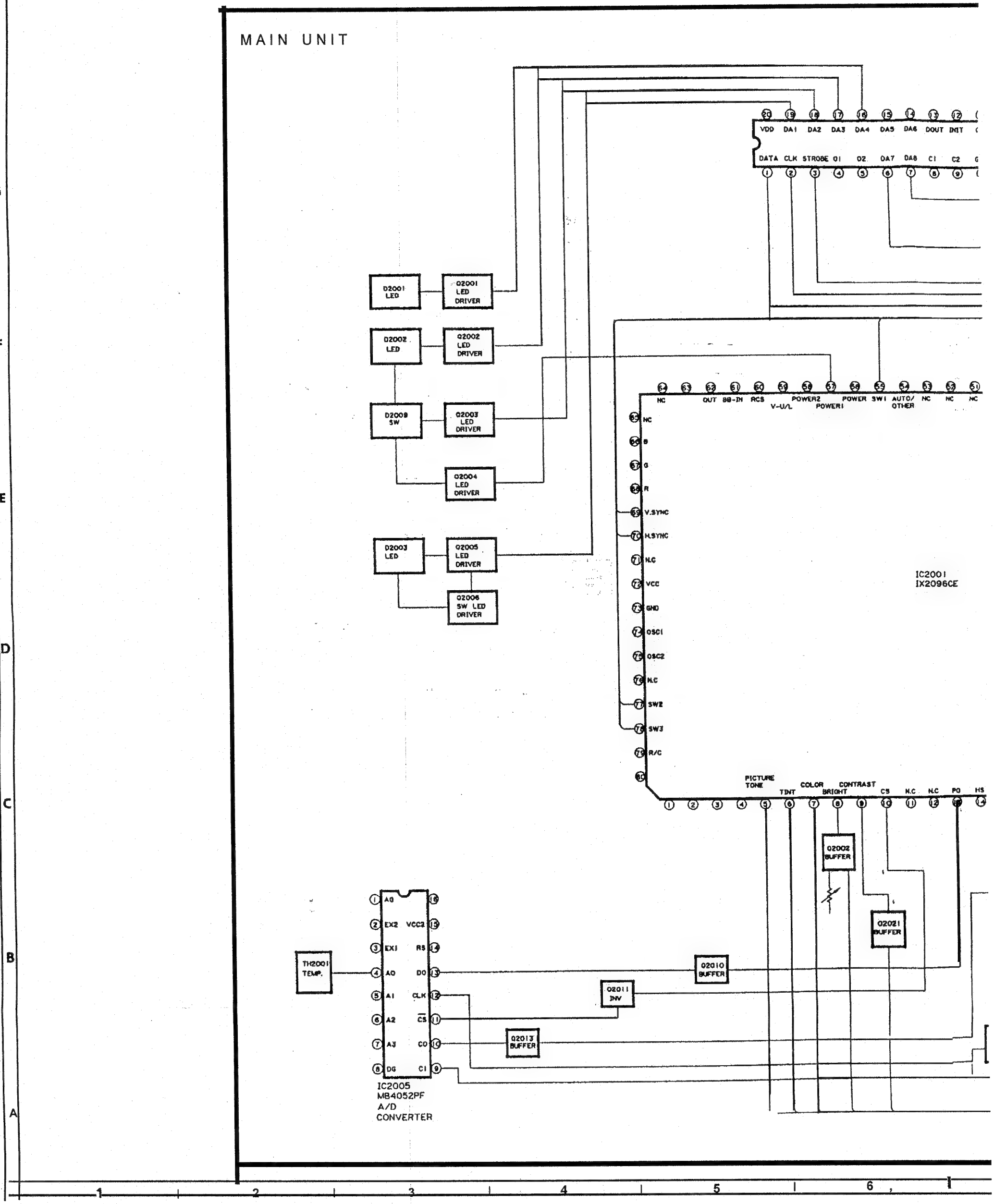
SP

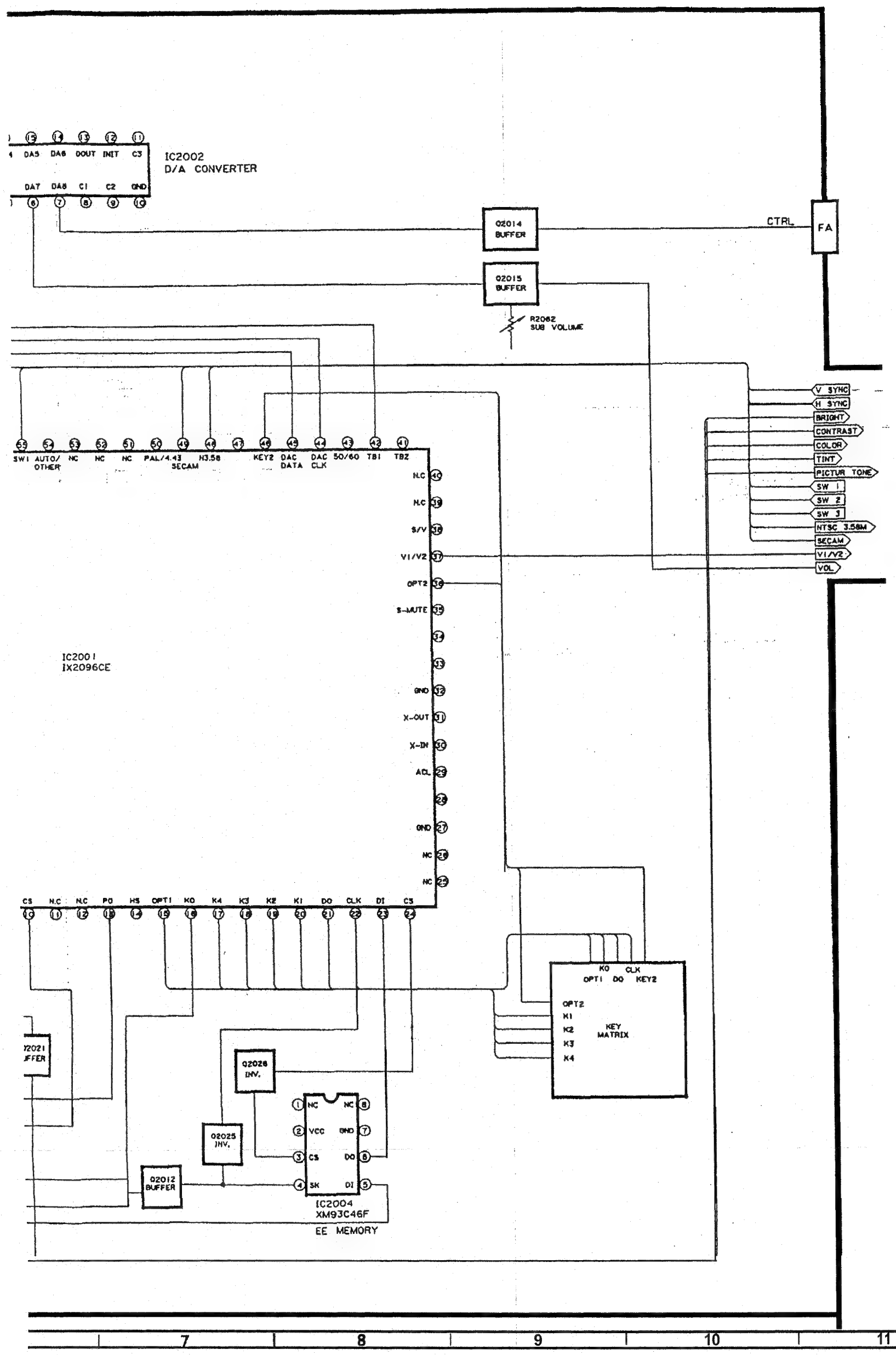

VSY
R
G
B
VSYN
HSYN
LA
R1505 R-BIAS
R1606 G-BIAS
R1607 B-BIAS
IC1504 AGC
Q1502 Q1503 Q1504 Q1505 CLAMP
IC1601 LCD INTERFACE
BUFFER
DIV.
Y AMP.
CLAMP
AMP. CONTROL
SYNC. SEP.
ADJ.
SYNC. PULSE
POLARITY
BIAS
2ND CHROMA
R-Y/B-Y DETECTOR
MATRIX
INT/EXT SWITCH
COMP
AGC
DETECTOR
BURST GATE
1ST CHROMA
KILLER
ACC DETECTOR
APC
PICTURE CONT
CONTRAST
TINT
VCO
R1629 WHITE BALANCE ADJ.
R1623 WHITE BALANCE ADJ.
IC406 PICTURE TONE CONTROL
Q802 AMP
Q803 BUFFER
R861 LEVEL ADJ.
MATRIX
BUFFER Q805 Q806 Q804
IC1503 M52055FP
Q1508 Q1507 Q1506 BUFFER
Q1509 Q1510 Q1511 BUFFER
DS
DH
R-Y/B-Y MATRIX
COLOR
CLAMP
Vref
P/N B-Y
P/N R-Y
P/N/S SW
Y CORRECT
BRIGHTNESS
SYSTEM LOGIC
DYNAMIC Y
TINT
CONTRAST
SHARPNESS
V BNT.
BLACK EXPAND
DC TRANS CORRECT
SYNC SEP.
50/60
Q807 BUFFER
IC1501
REVERSE
OUT DC CTRL
SUB BRIGHT
GAMMA
GAMMA CREAT
R AMP
G AMP
B AMP
GATE PULSE
SYNC. SEPARATER
R SW
G SW
B SW
IC602 INV.
Q808 BUFFER
IC501
IC502

7 6

BLOCK DIAGRAM-2 / BLOCKSCHALTPLAN-2

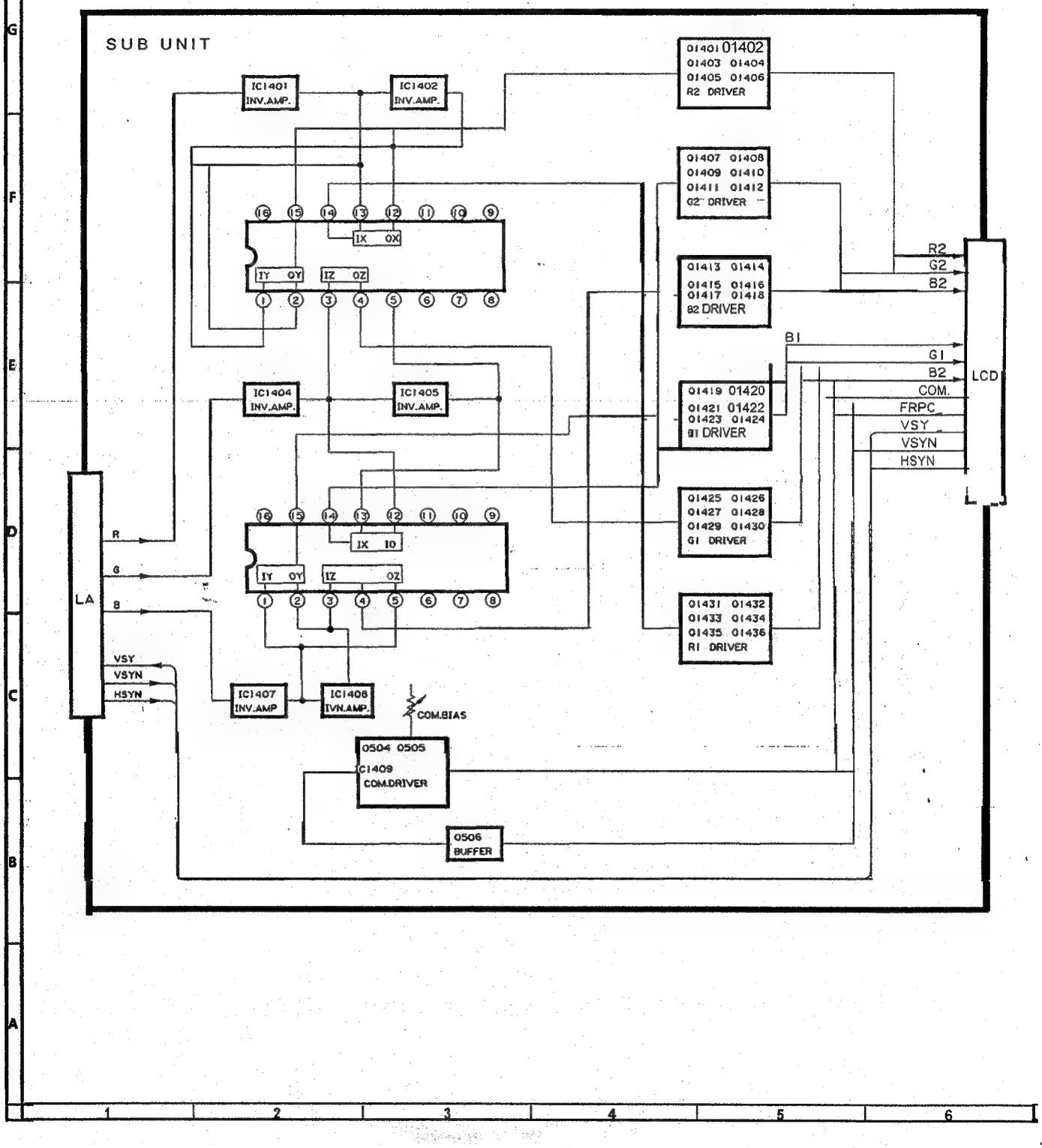
MAIN UNIT

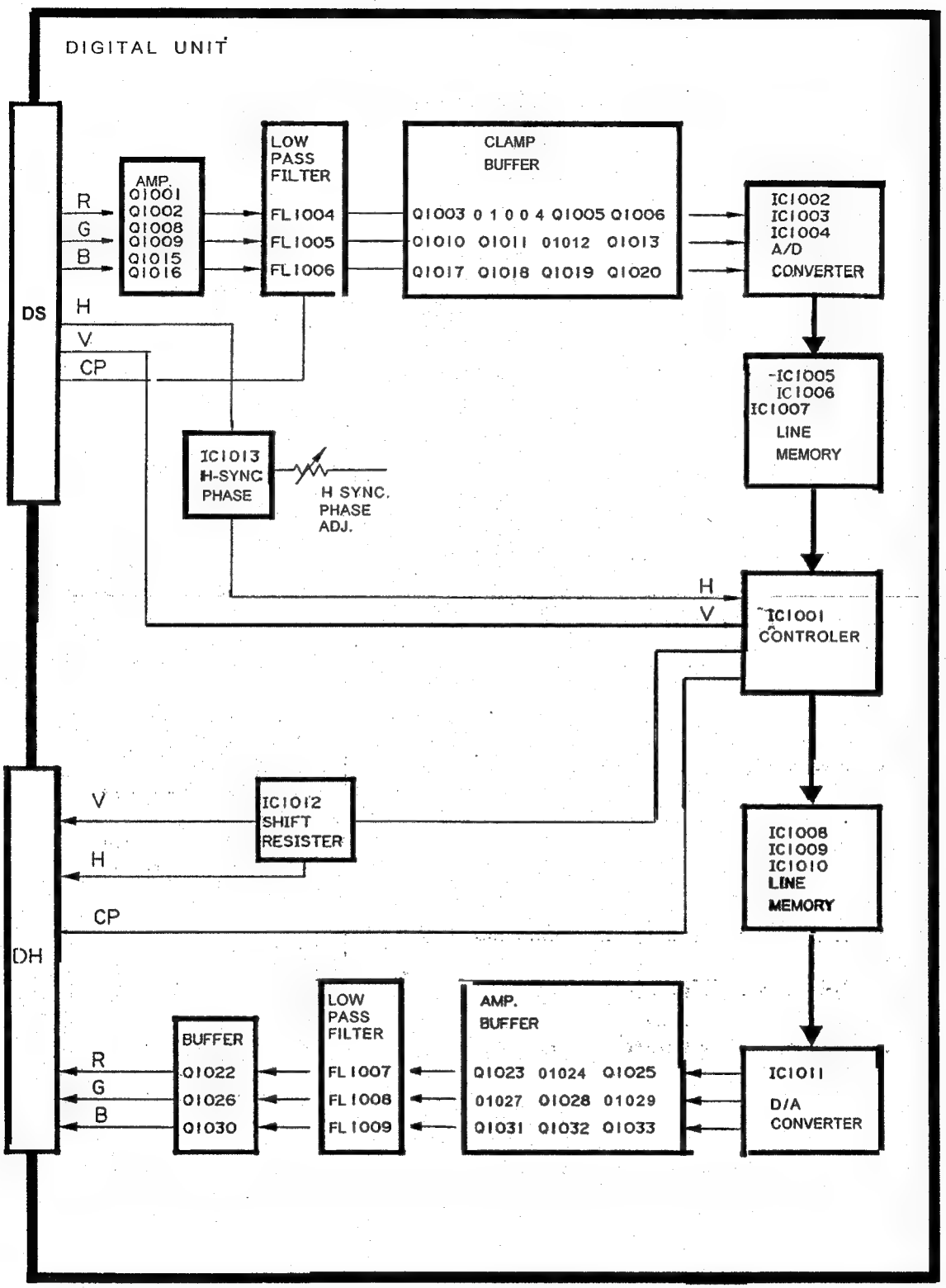



DA5
DA6
DOUT
INIT
C3
DA7
DA8
C1
C2
GND
IC2002
D/A CONVERTER
02014
BUFFER
02015
BUFFER
CTRL
FA
R2062
SUB VOLUME
V SYNC
H SYNC
BRIGHT
CONTRAST
COLOR
TINT
PICTUR TONE
SW 1
SW 2
SW 3
NTSC 3.58M
SECAM
V1/V2
VOL
SW1
AUTO/ OTHER
NC
PAL/4.43 SECAM
N3.58
KEY2
DAC DATA
DAC CLK
50/60
TB1
TB2
N.C
S/V
V1/V2
OPT2
S-MUTE
GND
X-OUT
X-IN
ACL
NC
IC2001
IX2096CE
CS
PO
HS
OPT1
KO
K4
K3
K2
K1
DO
CLK
DI
02021
02026
INV.
02025
INV.
02012
BUFFER
NC
VCC
SK
IC2004
XM93C46F
EE MEMORY
KEY MATRIX

7 8

BLOCK DIAGRAM-3 / BLOCKSCHALTPLAN-3




DIGITAL UNIT
DS
R
G
B
AMP.
Q1001
Q1002
Q1008
Q1009
Q1015
Q1016
LOW PASS FILTER
FL1004
FL1005
FL1006
CLAMP BUFFER
Q1003 Q1004 Q1005 Q1006
Q1010 Q1011 Q1012 Q1013
Q1017 Q1018 Q1019 Q1020
IC1002
IC1003
IC1004
A/D CONVERTER
H
V
CP
IC1005
IC1006
IC1007
LINE MEMORY
IC1013
H-SYNC PHASE
H SYNC. PHASE ADJ.
H
V
IC1001
CONTROLER
DH
V
H
CP
IC1012
SHIFT RESISTER
IC1008
IC1009
IC1010
LINE MEMORY
R
G
B
BUFFER
Q1022
Q1026
Q1030
LOW PASS FILTER
FL1007
FL1008
FL1009
AMP. BUFFER
Q1023 Q1024 Q1025
Q1027 Q1028 Q1029
Q1031 Q1032 Q1033
IC1011
D/A CONVERTER

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual: electrical components having such featuresare identified by "⚠" in the Replacement Parts Lists. The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschfen haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenshaften sind in den Ersatzteil durch "⚠" gekennzeichnet.
Der Gebrauch von Ersatzteilen, die nicht deselben Sicherheitseigenschaften haben wie die vom Hersteller empfohlenen ud in der Bedienungsanleitung angegebenen, können zur Ursache von Blitzeinschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATSTEILE BESTELLT"

Damit Ihre Bestellung promt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

1. MODELL NR.
2. REF. NR.
3. ERSATZTEIL NR.
4. BESCHREIBUNG
5. KODE
6. QUANTITÄT

MARK ★: SPARE PARTS-DELIVERY SECTION

MARKIERUNG★: ERSATZTEILE-LIEFERUNG

Ref. No.	Part No.	★	Description	Code

PRINTED WIRING BOARD ASSEMBLIES

(NOT REPLACEMENT ITEM)

DSETU1432DE01	Main Unit	—
DUNTK7780DE01	Sub Unit	—
DUNTK7781DE01	Bimetal Unit	—
DUNTK7782DE01	Digital Unit	—
CDENC0073CE01	Power/Ballast Unit Ass'y	—
RDENC0057CEZZ	Power Unit	—
RDENC0058CEZZ	Ballast Unit	—

—— End of PWB ASS'Y ——

ASSEMBLY UNITS

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

RUNTK0353CEZZ	J	LCD Module Unit	**

—— End of LED UNIT ——

DSETU1432DE01

MAIN UNIT

INTEGRATED CIRCUITS

IC302	VHiNJ2233BM-1	J		AE
IC303	VHiM5282FP/-1	J	M5282FP	AH
IC304	VHiTDA7056/-1	J	TDA7056	AP
IC402	VHiNJ2233BM-1	J	NJ2233BM	AE
IC403	VHiNJM2234M-1	J	NJM2234M	AF
IC404	VHiNJM2245M-1	J		AF
IC405	VHiNJM2245M-1	J		AF
IC406	VHiNJM2209M-1	J	NJM2209M	AG
IC801	VHiTA8795F/-1	J	TA8795AF	AZ
IC802	VHiTC7S04F/-1	J	TC7S04F	AC
IC901	RH-iX1843CEZZ	J	PQ12RF1	AF
IC1501	RH-iX1924CEZZ	J	IR3P89	AP
IC1502	VHiSNHC00NS-1	J	SNHCOONS	AC
IC1503	VHiM52055FP-1	J	M52055FP	AH
IC1504	VHiNJM2060M-1	J	NJM2060M	AE
IC1601	RH-iX1052CEZZ	J	M51406FP	AW
IC2001	RH-iX2096CEZZ	J		BA
IC2002	VHiLH5048F/-1	J	LH5048N	AK
IC2004	VHiXM93C46F-1	J	XRM93C46AF	AH
IC2005	VHiMB4052PF-1	J	MB4052PF	AP
IC2006	RH-iX1069CEZZ	J	M51943AML	AE

TRANSISTORS

Q401	VSBC847B1 F/-1	J	BC847B1F	AA
Q402	VSDTC1 24EK/-1	J	DTC124EK	AB
Q403	VSBC857B3F/-1	J	BC857B3F	AA
Q405	VSBC847B1 F / - 1	J	BC847B1F	AA
Q406	VSBC847B1 F / - 1	J	BC847B1F	AA
Q408	VSBC847B1 F / - 1	J	BC847B1F	AA
Q409	VSBC847B1 F/-1	J	BC847B1F	AA

Ref. No.	Part No.	★	Description	Code

DSETU1432DE01

MAIN UNIT (Continued)

TRANSISTORS (Continued)

Q410	VSBC847B1 F/-1	J	BC847B1F	AA
Q412	VSBC847B1 F / - 1	J	BC847B1F	AA
Q501	VSBC847B1 F / - 1	J	BC847B1F	AA
Q510	VSDTC124EK/-1	J	DTC124EK	AB
Q801	VSDTC144EU/-1	J	DTC144EU	AB
Q802	VSBC847B1 F / - 1	J	BC847B1F	AA
Q803	VSBC847B1 F / - 1	J	BC847B1F	AA
Q804	VSBC857B3F/-1	J	BC857B3F	AA
Q805	VSBC857B3F/-1	J	BC857B3F	AA
Q806	VSBC857B3F/-1	J	BC857B3F	AA
Q807	VSBC857B3F/-1	J	BC857B3F	AA
Q808	VSBC857B3F/-1	J	BC857B3F	AA
Q810	VSBC847B1 F / - 1	J	BC847B1F	AA
Q901	VSBC847B1 F / - 1	J	BC847B1F	AA
Q902	VSDTC124EK/-1	J	DTC124EK	AB
Q903	VSBC857B3F/-1	J	BC857B3F	AA
Q904	VSDTC124EK/-1	J	DTC124EK	AB
Q1501	VSBC847B1 F / - 1	J	BC847B1F	AA
Q1502	VSBC847B1 F/-1	J	BC847B1F	AA
41503	VSBC847B1 F/-1	J	BC847B1F	AA
Q1504	V SiMX2/////-1	J		AB
Q1505	VSBC847B1 F / - 1	J	BC847B1F	AA
Q1506	VSBC857B3F/-1	J	BC857B3F	AA
41507	VSBC857B3F/-1	J	BC857B3F	AA
Q1508	VSBC857B3F/-1	J	BC857B3F	AA
Q1509	VSBC847B1 F / - 1	J	BC847B1F	AA
41510	VSBC847B1 F/-1	J	BC847B1F	AA
41511	VSBC847B1 F/-1	J	BC847B1F	AA
Q2001	VSBC847B1 F / - 1	J	BC847B1F	AA
42002	VSBC847B1 F/-1	J	BC847B1F	AA
Q2003	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2004	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2005	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2006	VSBC857B3F/-1	J	BC857B3F	AA
Q2007	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2009	VSBC857B3F/-1	J	BC857B3F	AA
42010	VSBC857B3F/-1	J	BC857B3F	AA
Q2011	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2012	VSBC857B3F/-1	J	BC857B3F	AA
Q2013	VSBC857B3F/-1	J	BC857B3F	AA
Q2014	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2015	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2017	VSBC847B1F/-1	J	BC847B1F	AA
Q2018	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2019	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2020	VSBC847B1 F / - 1	J	BC847B1F	AA
42021	VSBC847B1 F/-1	J	BC847B1F	AA
Q2022	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2024	VSBC857B3F/-1	J	BC857B3F	AA
Q2025	VSBC847B1 F / - 1	J	BC847B1F	AA
Q2026	VSBC857B3F/-1	J	BC857B3F	AA

Ref. No.	Part No.	★	Description	Code

DIODES

D301	RH-EX0226CEZZ	J	ZenerDiode	AB
D302	RH-EX0226CEZZ	J	ZenerDiode	AB
D401	VHDDAN202U/-1	J		AA
D402	RH-EX0226CEZZ	J	ZenerDiode	AB
D403	RH-EX0226CEZZ	J	ZenerDiode	AB
D404	RH-EX0226CEZZ	J	ZenerDiode	AB
D407	VHDDAN202U/-1	J		AA
D461	RH-EX0226CEZZ	J	ZenerDiode	AB
D501	VHDMA1 52WA/-1	J		AA
D502	RH-EX0623CEZZ	J	ZenerDiode	AB
D503	RH-EX0623CEZZ	J	Zener Diode	AB
D901	VHDDAN202U/-1	J		AA
D902	RH-EX0626CEZZ	J	Zener Diode	AB
D903	VHDDAN202U/-1			AA
D904	RH-EX0627CEZZ	J	Zener Diode	AB
D905	VHDDAN202U/-1	J		AA
D906	RH-EX0227CEZZ	J	ZenerDiode	AB
D907	VHDDAN202U/-1	J		AA
D908	RH-EX0631CEZZ	J	ZenerDiode	AB
D909	RH-EX0624CEZZ	J	Zener Diode	AB
D1501	VHDDAN202U/-1	J		AA
D1502	VHDDAN202U/-1	J		AA
D1503	VHDDAN202U/-1	J		AA
D1601	RH-EX0625CEZZ	J	ZenerDiode	AB
D2004	VHDMA143///-1	J		AB
D2005	VHDMA143///-1	J		AB
D2006	VHDMA143///-1	J		AB
D2007	VHDDAN202U/-1	J		AA
D2008	VHDDAN202U/-1	J		AA
D2009	RH-EX0225CEZZ	J	ZenerDiode	AB
D2010	VHDDAN202U/-1	J		AA
D2012	VHDMA143///-1	J		AB
D2013	VHDMA143///-1	J		AB
D2014	VHDMA143///-1	J		AB
D2015	VHDMA143///-1	J		AB
D2016	VHDMA143///-1	J		AB
D2017	VHDMA143///-1	J		AB
D2018	VHDDAN202U/-1	J		AA
D2019	VHDDAN202U/-1	J		AA
D2020	VHDDAN202U/-1	J.		AA
D2022	VHDMA143///-1	J		AB
D2023	VHDDAN202U/-1	J		AA
D2024	VHDDAN202U/-1	J		AA
D2025	VHDMA143///-1	J		AB
D2026	V H DMA143///-1	J		AB
02027	V H DMA143///-1	J		AB
D2028	VHDDAN202U/-1	J		AA
D2029	VHDDAN202U/-1	J		AA
D2030	VHDDAN202U/-1	J		AA
D2031	VHDDAN202U/-1	J		AA
D2032	VHDDAN202U/-1	J		AA
D2033	VHDDAN202U/-1	J		AA
TH2001	RH-HZ0029CEZZ	J	Thermistor	AE

Ref. No.	Part No.	*	Description	Code

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MAIN UNIT (Continued)

PACKAGED CIRCUITS

X801	RCRSB0058GEZZJ	Crystal	AH
X802	RCRSB0055GEZZJ	Crystal	AH

COILS AND TRANSFORMERS

CF401	RFILC0286CEZZ J	Ceramic Filter	AE
CF801	RFILA0034CEZZ J	Ceramic Filter	AD
CF2001	RFILC0034TAZZ J	Ceramic Filter	AD
DL401	RCILZ0585CEZZ J	Delay Line	AE
DL402	RCILZ0820CEZZ J	Delay Line	AT
DL403	RCILZ0740CEZZ J	Delay Line	AH
DL801	RCILZ0808CEZZ J	Delay Line	AR
L401	VP-IM270K3R8NJ	Peaking Coil, 27μH	AC
L402	VP-1M180K2R5NJ	Peaking Coil, 18μH	AC
L404	VP-1M221K170N J	Peaking Coil, 220μH	AC
L801	VP-IMI50K2R2NJ	Peaking Coil, 15μH	AC
L901	VP-IM220K2R9NJ	Peaking Coil, 22μH	AC
L902	VP-IM220K2R9NJ	Peaking Coil, 22μH	AC
L1501	VP-IM101K7R7NJ	Peaking Coil, 100μH	AC
T401	RCILI0520CEZZ J	IF Coil	AE
T402	RCILI051 2CEZZJ	IF Coil	AE
T801	RCILI0435CEZZ J	IF Coil	AE
T802	RCILI0435CEZZ J	IF Coil	AE
T803	RCILZ0511 CEZZ J	Coil	AD
T804	RCILI0435CEZZ J	IF Coil	AE
T805	RCILI0364CEZZ J	IF Coil	AD
T2001	RCILB0024CEZZ J	Oscillation Coil	AD

CONTROLS

R858	RVR-M7901TAZZ J	10k(B) Colour	AC
R859	RVR-M7895TAZZ J	1k(B) 1H Delay	AC
R860	RVR-M7903TAZZ J	22k(B) Tint	AC
R861	RVR-M7895TAZZ J	1k(B) Y Level	AC
R1546	RVR-M7898TAZZ J	3.3k(B) ACC	AC
R1602	RVR-M7901TAZZ J	10k(B) Sub Bias (R)	AC
R1605	RVR-M7901TAZZ J	10k(B) Sub Bias (B)	AC
R1608	RVR-M7901TAZZ J	10k(B) Sub Bias (G)	AC
R1623	RVR-M7895TAZZ J	1k(B) White Balance (R)	AC
RI 629	RVR-M7895TAZZ J	1k(B) White Balance (B)	AC
R2062	RVR-M7898TAZZ J	3.3k(B) Sub Volume	AC
R2139	RVR-M7901TAZZ J	10k(B) Sub Brightness	AC

Ref. No.	Part No.	*	Description	Code

CAPACITORS

C301	VCEAPH1CW106MJ	10	16V Electrolytic AB
C303	VCEAPH1CW106M J	10	16V Electrolytic AB
C306	VCE9PF1CW106M J	10	16V Elect. (N.P) AC
C307	VCEAGA1EW477MJ	470	25V Electrolytic AD
C308	VCKYCY1HB272KJ	2700p	50V Ceramic AA
C309	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C310	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C311	VCEAPF1CW226MJ	2 2	16V Electrolytic AB
c315	VCEAGA1CW107MJ	100	16V Electrolytic AB
C401	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C402	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C404	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C405	VCEAPH1CW106M J	10	16V Electrolytic AB
C407	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C408	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C409	VCKYCY1EB103K J	0.01	25V Ceramic AA
C410	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C411	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C412	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C413	VCCCCY1HH220JJ	22p	50V Ceramic AA
c414	VCCCCY1HH470JJ	47p	50V Ceramic AA
C416	VCEAPH1CW106M J	10	16V Electrolytic AB
C417	VCEAPF1CW226MJ	2 2	16V Electrolytic AB
C418	VCCCCY1HH470JJ	47p	50V Ceramic AA
C420	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C421	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C422	VCCCCY1HH150JJ	15p	50V Ceramic AA
C423	VCCCCY1HH470JJ	47p	50V Ceramic AA
C424	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C425	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C426	VCEAPF1AW476MJ	4 7	10V Electrolytic AB
C427	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C428	VCEAPH1CW106M J	10	16V Electrolytic AB
c429	VCCCCY1HH151JJ	150p	50V Ceramic AA
C430	VCEAPF1CW336MJ	3 3	16V Electrolytic AB
c431	VCCCCY 1HH680JJ	68p	50V Ceramic AA
C432	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
c434	VCKYCY1HB472KJ	4700p	50V Ceramic AA
c435	VCEAPF1CW226MJ	2 2	16V Electrolytic AB
C438	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
c439	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C501	VCEAPH1HW225MJ	2.2	50V Electrolytic AB
C505	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
c514	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C801	VCCCCY1HH221JJ	220p	50V Ceramic AA
C802	VCEAPH1EW475MJ	4.7	25V Electrolytic AB
C803	VCCCCY1HH220JJ	22p	50V Ceramic AA
C804	VCCCCY1HH220JJ	22p	50V Ceramic AA
C805	VCCCCY1HH220JJ	22p	50V Ceramic AA
C806	VCCCCY1HH101JJ	100p	50V Ceramic AA
C807	VCCCCY1HH101JJ	100p	50V Ceramic AA
C808	VCCCCY1HH390JJ	39p	50V Ceramic AA
C809	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C810	VCKYCY1EB103KJ	0.01	25V Ceramic AA

Ref. No.	Part No.	*	Description	Code

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MAIN UNIT (Continued)

CAPACITORS (Continued)

C811	VCCCCY1HH180JJ	18p	50V Ceramic AA
C812	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C813	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C814	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C815	VCKYTV1HF273ZJ	0.027	50V Ceramic AB
C816	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C817	VCE9PF1HW105M J	1	50V Elect. (N.P) AC
C818	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C819	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C820	VCCCCY1HH270JJ	27p	50V Ceramic AA
C821	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C822	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C823	VCCCCY1HH220JJ	22p	50V Ceramic AA
C824	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C825	VCKYTV1HF273ZJ	0.027	50V Ceramic AB
C826	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C828	VCKYTV1HF273ZJ	0.027	50V Ceramic AB
C830	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C831	VCEAPH1HW105M J	1	50V Electrolytic AB
C832	VCKYCY1HB152KJ	1500p	50V Ceramic AA
C834	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C835	VCKYTV1EB223KJ	0.022	25V Ceramic AB
C836	VCEAPH1HW225MJ	2.2	50V Electrolytic AB
C837	VCEAPH1HW105M J	1	50V Electrolytic AB
C838	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C839	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C840	VCEAPH1HW105M J	1	50V Electrolytic AB
C841	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C842	VCCCCY1HH221JJ	220p	50V Ceramic AA
C843	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C844	VCEAPH1HW105M J	1	50V Electrolytic AB
C845	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C846	VCEAPH1HW105M J	1	50V Electrolytic AB
C847	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C848	VCEAPH1HW105M J	1	50V Electrolytic AB
C849	VCEAPH1CW106M J	10	16V Electrolytic AB
C851	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C852	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C853	VCKYCY1EB103KJ	0.01	25V Ceramic AA
C854	VCCCCY1HH100DJ	10p	50V Ceramic AA
C901	VCEAPF1CW226MJ	2 2	16V Electrolytic AB
C902	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
C903	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C904	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C905	VCKYTV1HF473ZJ	0.047	50V Ceramic AB
C906	VCEAPF1CW226MJ	2 2	16V Electrolytic AB
C907	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 501	VCEAPF1CW476MJ	4 7	16V Electrolytic AC
CI 502	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI 503	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 504	VCKYCY1CF104ZJ	0.1	16V Ceramic AA

Ref. No.	Part No.	*	Description	Code

CAPACITORS (Continued)

CI 505	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI 506	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 507	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI 508	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI 509	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI510	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C1511	VCEAPF1AW476MJ	4 7	10V Electrolytic AB
CI512	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C1513	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI514	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C1515	VCKYCY1HB222KJ	2200p	50V Ceramic AA
CI516	VCEAPH1HW105M J	1	50V Electrolytic AB
CI517	VCCCCY1HH151JJ	150p	50V Ceramic AA
C1518	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C1519	VCKYCY1CF104Z J	0.1	16V Ceramic AA
CI 520	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI521	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI 522	VCEAPF1AW476MJ	4 7	10V Electrolytic AB
CI 523	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 524	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
CI 525	VCEAPH1HW104MJ	0.1	50V Electrolytic AB
CI 526	VCEAPH1CW106M J	10	16V Electrolytic AB
CI 528	VCEAPF1HW225MJ	2.2	50V Electrolytic AB
CI 529	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
C1531	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
CI 532	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 533	VCEAPH1CW106M J	10	16V Electrolytic AB
CI 534	VCEAPH1CW106M J	10	16V Electrolytic AB
CI 535	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
CI 536	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
CI 537	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
CI 538	VCEAPH1CW106MJ	1 0	16V Electrolytic AB
CI 539	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 540	VCEAPF1CW226MJ	2 2	16V Electrolytic AB
CI 541	VCCCCY1HH101JJ	100p	50V Ceramic AA
CI601	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 602	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 603	VCKYCY1EB103KJ	0.01	25V Ceramic AA
CI 604	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI605	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI 606	VCEAPH1HW105M J	1	50V Electrolytic AB
CI 607	VCEAPH1HW105M J	1	50V Electrolytic AB
CI608	VCEAPH1HW105M J	1	50V Electrolytic AB
CI609	VCCCCY1HH181JJ	180p	50V Ceramic AA
CI610	VCEAGA0JW107MJ	100	6.3V Electrolytic AB
CI611	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI612	VCEAPF1CW226MJ	2 2	16V Electrolytic AB
CI613	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI614	VCEAPF1AW476MJ	4 7	10V Electrolytic AB
CI615	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI616	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI617	VCKYCY1CF104ZJ	0.1	16V Ceramic AA
CI618	VCEAPH1HW105M J	1	50V Electrolytic AB
CI619	VCEAPH1HW105M J	1	50V Electrolytic AB

Ref. No.	Part No.	★	Description	Code

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MAIN UNIT (Continued)

CAPACITORS (Continued)

CI 620	VCEAPH1HW105M	J	1 50V Electrolytic	AB
CI 622	VCKYCY1CF104ZJ	0.1 16V Ceramic		AA
C2001	VCCCCY1HH330JJ	33p 50V Ceramic		AA
C2002	VCCCCY1HH680JJ	68p 50V Ceramic		AA
C2007	VCCCCYIHHIOIJ	J100p 50V Ceramic		AA
C2009	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2010	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2011	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2012	VCKYCY1CF104ZJ	0.1 16V Ceramic		AA
C2013	VCCCCY1HH391JJ	390p 50V Ceramic		AA
C2014	VCKYCY 1 HB681 KJ	680p 50V Ceramic		AA
C2015	VCEAPF1AW476MJ	4 7 10V Electrolytic		AB
C2016	VCEAPF0JW476MJ	4 7 6.3V Electrolytic		AB
C2017	VCKYCY1EB103KJ	0.01 25V Ceramic		AA
C2018	VCEAPH1CW106MJ	1 0 16V Electrolytic		AB
C2019	VCEAPH1CW106MJ	1 0 16V Electrolytic		AB
C2020	VCEAPH1CW106M	J 10 16V Electrolytic		AB
C2021	VCEAPH1CW106M	J 10 16V Electrolytic		AB
C2022	VCCCCY1HH680JJ	68p 50V Ceramic		AA
C2023	VCCCCY 1HH680JJ	68p 50V Ceramic		AA
C2024	VCCCCY1HH680JJ	68p 50V Ceramic		AA
C2025	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2026	VCCCCY 1 HH 15 1JJ	150p 50V Ceramic		AA
C2027	VCEAPH1CW106M	J 10 16V Electrolytic		AB
C2028	VCKYCY1CF104ZJ	0.1 16V Ceramic		AA
C2030	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2031	VCKYCY1CF104ZJ	0.1 16V Ceramic		AA
C2032	VCKYCY1HB102K	J 1000p 50V Ceramic		AA
C2033	VCEA2H0JW338MJ	3300 6.3V Electrolytic		AE
C2034	VCKYCY1HB102K	J 1000p 50V Ceramic		AA
C2035	VCKYCY1CF104ZJ	0.1 16V Ceramic		AA
C2036	VCKYCY1HB102K	J 1000p 50V Ceramic		AA
C2037	VCKYCY1HB102K	J 1000p 50V Ceramic		AA
C2040	VCKYCY1EB103KJ	0.01 25V Ceramic		AA
C2041	VCEAPH1CW106M	J 10 16V Electrolytic		AB
C2042	VCEAPH1CW106MJ	1 0 16V Electrolytic		AB
C2043	VCEAPH1HW105M	J 1 50V Electrolytic		AB
C2044	VCKYCY1EB103KJ	0.01 25V Ceramic		AA
C2045	VCEAPH1HW105M	J 1 50V Electrolytic		AB
C2046	VCEAPH1CW106M	J 10 16V Electrolytic		AB
C2047	VCEAPH1CW106M	J 10 16V Electrolytic		AB
C2048	VCKYCY1EB103KJ	0.01 25V Ceramic		AA
C2049	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2050	VCCCCYIHHIOIJ	J100p 50V Ceramic		AA
C2052	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2063	VCEAPF1HW106M	J 10 50V Electrolytic		AB
C2064	VCEAPF1HW106M	J 10 50V Electrolytic		AB
C2065	VCKYCY1CF104ZJ	0.1 16V Ceramic		AA
C2151	VCCCCY1HH101JJ	100p 50V Ceramic		AA
c2153	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2154	VCCCCYIHHIOIJ	J100p 50V Ceramic		AA

Ref. No.	Part No.	★	Description	Code

CAPACITORS (Continued)

C2155	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2156	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2157	VCCCCY1HH101JJ	100p 50V Ceramic		AA
C2158	VCCCCYIHHIOIJ	J100p 50V Ceramic		AA
C2163	VCEAPH1CW106M	J 10 16V Electrolytic		AB

RESISTORS

R302	VRS-CY1JF563J	J 56k 1/16W Metal Oxide		AA
R306	VRS-CY 1JF563JJ	56k 1/16W Metal Oxide		AA
R307	VRS-CYI JF563JJ	56k 1/16W Metal Oxide		AA
R311	VRS-CYI JF102JJ	Ik 1/16W Metal Oxide		AA
R313	VRS-CY 1JF563JJ	56k 1/16W Metal Oxide		AA
R319	VRS-CY1 JF472J	J 4.7k 1/16W Metal Oxide		AA
R320	VRS-CY1JF102J	J1k 1/16W Metal Oxide		AA
R321	VRS-TX2HF8R2J	J 8.2 1/2W Metal Oxide		AA
R322	VRS-TX2HF8R2J	J 8.2 1/2W Metal Oxide		AA
R323	VRS-CY1JF682J	J 6.8k I/I 6W Metal Oxide		AA
R403	VRS-TW2ED750J	7 5 1/4W Metal Oxide		Aa
R404	VRS-CY1JF101J	100 1/16W Metal Oxide		AA
R405	VRS-CY1JF122J	1.2k 1/16W Metal Oxide		AA
R406	VRS-CY 1 J F27 1JJ	270 1/16W Metal Oxide		AA
R407	VRS-CY1JF102J	J 1k 1/16W Metal Oxide		AA
R408	VRS-CYI JFOOOJ	J 0 1/16W Metal Oxide		AA
R411	VRS-CYI JF473JJ	47k 1/16W Metal Oxide		AA
R412	VRS-CY1JF103JJ	10k 1/16W Metal Oxide		AA
R413	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R414	VRS-TW2ED750JJ	7 5 1/4W Metal Oxide		AA
R415	VRS-CY1JF102J	J 1k 1/16W Metal Oxide		AA
R416	VRS-CY 1JF102JJ	1k 1/16W Metal Oxide		AA
R417	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R418	VRS-TW2ED750JJ	7 5 1/4W Metal Oxide		AA
R419	VRS-TW2ED750JJ	7 5 1/4W Metal Oxide		AA
R420	VRS-CY 1 JF 10 1 JJ	100 1/16W Metal Oxide		AA
R421	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R422	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R423	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R424	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R426	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R427	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R430	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R431	VRS-CY1JF271JJ	2 7 0 1/16W Metal Oxide		AA
R432	VRS-CY1JF151J	J 150 1/16W Metal Oxide		AA
R433	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R434	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R435	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R437	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R438	VRS-CY1JF333JJ	3 3 k 1/16W Metal Oxide		AA
R439	VRS-CY 1JF47 1JJ	470 1/16W Metal Oxide		AA
R440	VRS-CY1JF101JJ	100 1/16W Metal Oxide		AA
R441	VRS-CY1JF223J	J 22k 1/16W Metal Oxide		AA
R444	VRS-CY1JF333JJ	3 3 k 1/16W Metal Oxide		AA
R446	VRS-CY1JF272J	J 2.7k 1/16W Metal Oxide		AA

Ref. No.	Part No.	★	Description	Code

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MAIN UNIT (Continued)

RESISTORS (Continued)

R447	VRS-CY 1JF273JJ	27k 1/16W Metal Oxide		AA
R448	VRS-CY1JF122J	J 1.2k 1/16W Metal Oxide		AA
R449	VRS-CYI JF472JJ	4.7k 1/16W Metal Oxide		AA
R450	VRS-CY 1JF223JJ	22k 1/16W Metal Oxide		AA
R451	VRS-CY1JF223J	J 22k 1/16W Metal Oxide		AA
R452	VRS-CY 1 JF5R6JJ	5.6 1/16W Metal Oxide		AA
R453	VRS-CYI JF272JJ	2.7k 1/16W Metal Oxide		AA
R454	VRS-CY1JF5R6JJ	5 . 6 1/16W Metal Oxide		AA
R455	VRS-CY 1JF472JJ	4.7k 1/16W Metal Oxide		AA
R456	VRS-CY 1JF682JJ	6.8k 1/16W Metal Oxide		AA
R457	VRS-CYIJFIOZJ	J 1k 1/16W Metal Oxide		AA
R458	VRS-CYIJFIOZJ	J Ik 1/16W Metal Oxide		AA
R459	VRS-CYIJFIOZJ	J Ik 1/16W Metal Oxide		AA
R460	VRS-CY1JF152J	J 1.5k 1/16W Metal Oxide		AA
R462	VRS-CYI JF392JJ	3.9k 1/16W Metal Oxide		AA
R463	VRS-CYI JF272JJ	2.7k 1/16W Metal Oxide		AA
R464	VRS-CY1JF151JJ	1 5 0 1/16W Metal Oxide		AA
R465	VRS-CY 1 F 10 2 JJ	1 k 1/16W Metal Oxide		AA
R466	VRS-CY 1 F 1 0 1 JJ	100 1/16W Metal Oxide		AA
R501	VRS-CY1 F 1 0 3 JJ	10k 1/16W Metal Oxide		AA
R502	VRS-CY1 F332J	J 3.3k 1/16W Metal Oxide		AA
R503	VRS-CY1 F 683 JJ	6Bk 1/16W Metal Oxide		AA
R504	VRS-CY1 F103JJ	10k 1/16W Metal Oxide		AA
R505	VRS-CY1JF103J	J10k 1/16W Metal Oxide		AA
R506	VRS-CY1JF103J	J10k 1/16W Metal Oxide		AA
R511	VRS-CY 1JF682J	J6.8k 1/16W Metal Oxide		AA
R529	VRS-TX2HF680J	J 6 8 1/2W Metal Oxide		AA
R541	VRS-TW2ED220J	J 2 2 1/4W Metal Oxide		AA
R801	VRS-CY1JF100J	J 10 1/16W Metal Oxide		AA
R802	VRS-CY1JF102J	J 1k 1/16W Metal Oxide		AA
R803	VRS-CY1JF222J	J 2.2k 1/16W Metal Oxide		AA
R804	VRS-CY1JF333J	J 33k 1/16W Metal Oxide		AA
R805	VRS-CY1JF123J	J 12k 1/16W Metal Oxide		AA
R806	VRS-CY1JF561J	J 560 1/16W Metal Oxide		AA
R807	VRS-CY1JF151J	J 150 1/16W Metal Oxide		AA
R808	VRS-CY1JF821J	J 820 1/16W Metal Oxide		AA
R809	VRS-CY1JF681J	J 680 1/16W Metal Oxide		AA
R810	VRS-CY1JF682J	J 6.8k 1/16W Metal Oxide		AA
R811	VRS-CY1JF821J	J 820 1/16W Metal Oxide		AA
R812	VRS-CY1JF103J	J10k 1/16W Metal Oxide		AA
R813	VRS-CY1JF102J	J 1 k I/I 6W Metal Oxide		AA
R814	VRS-CY1JF102J	J 1 k 1/16W Metal Oxide		AA
R815	VRS-CY1JF561J	J 560 1/16W Metal Oxide		AA
R816	VRS-CY1JF561J	J 560 1/16W Metal Oxide		AA
R817	VRS-CY1JF561J	J 560 1/16W Metal Oxide		AA
R818	VRS-CY1JF272J	J 2.7k I/I 6W Metal Oxide		AA
R819	VRS-CY1JF272J	J2.7k 1/16W Metal Oxide		AA
R820	VRS-CY1JF272J	J2.7k 1/16W Metal Oxide		AA
R821	VRS-CY1JF222J	J2.2k 1/16W Metal Oxide		AA
R822	VRS-CY1JF222J	J2.2k 1/16W Metal Oxide		AA
R823	VRS-CY 1 JF222J	J2.2k 1/16W Metal Oxide		AA

Ref. No.	Part No.	★	Description	Code

RESISTORS (Continued)

R824	VRS-CY1JF153J	J 15k 1/16W Metal Oxide		AA
R825	VRS-CYIJFIOZJ	J 1k 1/16W Metal Oxide		AA
R826	VRS-CYIJFIOZJ	J 1k 1/16W Metal Oxide		AA
R827	VRS-CYIJFIOZJ	J 1k I/I 6W Metal Oxide		AA
R828	VRS-CY1 JF222J	J 2.2k 1/16W Metal Oxide		AA
R829	VRS-CY1JF473J	J 47k 1/16W Metal Oxide		AA
R830	VRS-CY1JF561J	J 560 I/I 6W Metal Oxide		AA
R831	VRS-CY1JF103JJ	10k 1/16W Metal Oxide		AA
R832	VRS-CY1 JF124J	J 120k 1/16W Metal Oxide		AA
R833	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R834	VRS-CY1 JF332J	J 3.3k 1/16W Metal Oxide		AA
R835	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R836	VRS-CY1 JF272J	J 2.7k 1/16W Metal Oxide		AA
R837	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R838	VRS-CY1 JF225JJ	2.2M 1/16W Metal Oxide		AA
R839	VRS-CY1JF391J	J 390 1/16W Metal Oxide		AA
R840	VRS-CY1JF222J	J 2.2k 1/16W Metal Oxide		AA
R841	VRS-CY1JF391J	J 390 1/16W Metal Oxide		AA
R842	VRS-CY1JF472J	J 4.7k 1/16W Metal Oxide		AA
R843	VRS-CY 1JF475JJ	4.7M 1/16W Metal Oxide		AA
R844	VRS-CY1JF101J	J 100 1/16W Metal Oxide		AA
R845	VRS-CYIJFIOZJ	J 1k I/I 6W Metal Oxide		AA
R846	VRS-CY1JF225J	J 2.2M 1/16W Metal Oxide		AA
R847	VRS-CYIJFIOIJ	J 100 1/16W Metal Oxide		AA
R848	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R849	VRS-CY 1JF222JJ	2.2k 1/16W Metal Oxide		AA
R850	VRS-CYI JF560JJ	56 1/16W Metal Oxide		AA
R851	VRS-CYI JF223JJ	22k 1/16W Metal Oxide		AA
R852	VRS-CY 1JF223JJ	22k 1/16W Metal Oxide		AA
R853	VRS-CY1 JF222J	J 2.2k 1/16W Metal Oxide		AA
R854	VRS-CY1JF561J	J 560 1/16W Metal Oxide		AA
R855	VRS-CY1 JF222J	J 2.2k 1/16W Metal Oxide		AA
R856	VRS-CY1JF471JJ	470 1/16W Metal Oxide		AA
R857	VRS-CYI JF563JJ	56k 1/16W Metal Oxide		AA
R858	*See Controls*			
R859	*See Controls*			
R860	*See Controls*			
R861	*See Controls*			
R862	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R863	VRS-CY1JF185J	J 1.8M I/I 6W Metal Oxide		AA
R869	VRS-CYIJFIOZJ	J 1k 1/16W Metal Oxide		AA
R901	VRS-TW2ED471J	J 4 7 0 1/4W Metal Oxide		AA
R902	VRS-TX2HF270J	J 27 1/2W Metal Oxide		AA
R903	VRS-TX2HF6R8J	J 6.8 1/2W Metal Oxide		AA
R904	VRS-TX2HF6R8J	J 6 . 8 1/2W Metal Oxide		AA
R905	VRS-TV1 JD473JJ	47k 1/16W Metal Oxide		AA
R906	VRS-TV1JD121JJ	120 1/16W Metal Oxide		AA
R907	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R908	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R909	VRS-CY1JF103J	J 10k 1/16W Metal Oxide		AA
R910	VRS-CY1 JF222J	J 2.2k 1/16W Metal Oxide		AA
R911	VRS-TW2ED680J	J 68 1/4W Metal Oxide		AA
R912	VRS-TW2ED271JJ	270 1/4W Metal Oxide		AA
R1501	VRS-CY1JF151J	J 150 1/16W Metal Oxide		AA

Ref. No.	Part No.	*	Description	Code

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MAIN UNIT (Continued)

RESISTORS (Continued)

R1502	VRS-CY1JF471JJ		4 7 0 1/16W	Metal Oxide AA
RI 503	VRS-CY1JF333JJ		33k 1/16W	Metal Oxide AA
RI 504	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI 505	VRS-CY1JF222J	J	2.2k 1/16W	Metal Oxide AA
R1506	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI 508	VRS-CY1JF333JJ		33k 1/16W	Metal Oxide AA
R1509	VRS-CY1JF822J	J	8.2k 1/16W	Metal Oxide AA
RI510	VRS-CY1JF682J	J	6.8k 1/16W	Metal Oxide AA
RI511	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI512	VRS-TX2HF120JJ	1	2 1/2W	Metal Oxide AA
RI513	VRS-CY1JF561JJ		5 6 0 1/16W	Metal Oxide AA
RI514	VRS-CY1JF102J	J I	k 1/16W	Metal Oxide AA
RI515	VRS-CY1JF333JJ		3 3 k 1/16W	Metal Oxide AA
RI516	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI 521	VRS-CY 1J F47 1	JJ	470 1/16W	Metal Oxide AA
RI 522	VRS-CY1JF471JJ		4 7 0 1/16W	Metal Oxide AA
RI 523	VRS-CY1JF471JJ		4 7 0 1/16W	Metal Oxide AA
R1524	VRS-CY1JF681JJ		6 8 0 1/16W	Metal Oxide AA
R1525	VRS-CY1JF681JJ		6 8 0 1/16W	Metal Oxide AA
RI 526	VRS-CY1JF681JJ		6 8 0 1/16W	Metal Oxide AA
RI 527	VRS-CY1JF220JJ		2 2 1/16W	Metal Oxide A A
RI 528	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI 529	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI 530	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI531	VRS-CY1JF472J	J	4.7k 1/16W	Metal Oxide AA
RI 532	VRS-CY 1JF392JJ		3.9k 1/16W	Metal Oxide A A
RI 533	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R1534	VRS-CY1JF682J	J	6.8k 1/16W	Metal Oxide AA
RI 535	VRS-CY1JF472J	J	4.7k 1/16W	Metal Oxide AA
RI 536	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
RI 537	VRS-CY1JF223J	J	22k 1/16W	Metal Oxide AA
RI 538	VRS-CY1JF103JJ		10k 1/16W	Metal Oxide AA
RI 539	VRS-CY1JF153J	J	15k 1/16W	Metal Oxide AA
RI 540	VRS-CY1JF472JJ		4.7k 1/16W	Metal Oxide A A
R1541	VRS-CY1JF473JJ		47k 1/16W	Metal Oxide AA
RI 542	VRS-CY1JF222J	J	2.2k 1/16W	Metal Oxide AA
RI 543	VRS-CY1JF104J	J	100k 1/16W	Metal Oxide AA
R1544	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R1545	VRS-CY1JF472JJ		4.7k 1/16W	Metal Oxide AA
R1546	*See Controls*			
RI 547	VRS-CY1JF472J	J	4.7k 1/16W	Metal Oxide AA
RI 548	VRS-CY1JF1OZJ	J	1k 1/16W	Metal Oxide AA
RI 549	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R1550	VRS-CY1JF681JJ		6 8 0 1/16W	Metal Oxide AA
RI 551	VRS-CY1JF681JJ		6 8 0 1/16W	Metal Oxide AA
RI 552	VRS-CY1JF681JJ		680 1/16W	Metal Oxide AA
RI 559	VRS-CY1JF681J	J	680 1/16W	Metal Oxide AA
RI 560	VRS-CY 1J F68 1J	J	680' 1/16W	Metal Oxide AA
RI 561	VRS-CY 1 J F68 1JJ		680 1/16W	Metal Oxide AA
RI 562	VRS-CY1JF681JJ		680 1/16W	Metal Oxide AA
RI 563	VRS-CY1JF681JJ		6 8 0 1/16W	Metal Oxide AA

Ref. No.	Part No.	*	Description	Code

RESISTORS (Continued)

R1564	VRS-CY1JF681JJ		6 8 0 1/16W	Metal Oxide AA
R1565	VRS-CY1JF000J	J	0 1/16W	Metal Oxide AA
R1566	VRS-CY1 JF000JJ		0 1/16W	Metal Oxide AA
RI567	VRS-CY1 JF000J	J	0 1/16W	Metal Oxide AA
R1568	VRS-CY1JF1OIJ	J	100 1/16W	Metal Oxide AA
RI569	VRS-CY 1 JF1 01	JJ	100 1/16W	Metal Oxide AA
R1570	VRS-CY1JF1OIJ	J	100 1/16W	Metal Oxide AA
R1571	VRS-CY1JF102J	J I	k 1/16W	Metal Oxide AA
R1572	VRS-CY1JF102J	J I	k 1/16W	Metal Oxide AA
R1573	VRS-CY1 JF102J	J I	k 1/16W	Metal Oxide AA
R1574	VRS-CY1JF101JJ		100 1/16W	Metal Oxide AA
RI575	VRS-CY1JF1OIJ	J	100 1/16W	Metal Oxide AA
R1576	VRS-CY1JF101JJ		100 1/16W	Metal Oxide AA
RI577	VRS-CY 1JF 10 1JJ		100 1/16W	Metal Oxide AA
R1579	VRS-CY1JF1OIJ	J	100 1/16W	Metal Oxide AA
RI580	VRS-CY1JF100J	J	10 1/16W	Metal Oxide AA
RI 581	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R1582	VRS-CY1JF682J	J	6.8k 1/16W	Metal Oxide AA
R1601	VRS-CY1JF682J	J	6.8k 1/16W	Metal Oxide AA
R1602	*See Controls*			
RI603	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R1604	VRS-CY1JF682JJ		6.8k 1/16W	Metal Oxide AA
R1605	*See Controls*			
RI606	VRS-CY1JF102JJ		1k 1/16W	Metal Oxide AA
R1607	VRS-CY1JF682JJ		6.8k 1/16W	Metal Oxide AA
RI 608	*See Controls*			
R1609	VRS-CY1JF102JJ	I	k 1/16W	Metal Oxide AA
RI610	VRS-CY1JF561JJ		560 1/16W	Metal Oxide AA
R1611	VRS-CY1JF472J	J	4.7k 1/16W	Metal Oxide AA
R1613	VRS-CY1JF102JJ		1k 1/16W	Metal Oxide AA
R1614	VRS-CY1JF102JJ	I	k 1/16W	Metal Oxide AA
RI615	VRS-CY1JF1OZJ	J	lk 1/16W	Metal Oxide AA
RI616	VRS-CY1JF221JJ		220 1/16W	Metal Oxide AA
R1617	VRS-CY1JF223JJ		22k 1/16W	Metal Oxide A A
R1618	VRS-CY1JF272J	J	2.7k 1/16W	Metal Oxide AA
RI620	VRS-CY1JF101JJ		100 1/16W	Metal Oxide AA
R1621	VRS-TX2HF120JJ		1 2 1/2W	Metal Oxide AA
R1622	VRS-CY1JF391JJ		390 1/16W	Metal Oxide AA
RI 623	*See Controls*			
RI626	VRS-CY1JF1OZJ	J	1k 1/16W	Metal Oxide AA
R1627	VRS-CY1JF332JJ		3.3k 1/16W	Metal Oxide AA
R1628	VRS-CY 1JF391JJ		390 1/16W	Metal Oxide AA
RI 629	*See Controls*			
R1632	VRS-CY1JF1OIJ	J	100 1/16W	Metal Oxide AA
RI877	VRS-CY1JF101JJ		100 1/16W	Metal Oxide AA
R2001	VRS-CY1JF1OZJ	J	lk 1/16W	Metal Oxide AA
R2002	VRS-CY1JF1OZJ	J	lk 1/16W	Metal Oxide AA
R2003	VRS-CY 1 JF82 1	JJ	820 1/16W	Metal Oxide AA
R2004	VRS-CY1JF102JJ		1k 1/16W	Metal Oxide AA
R2005	VRS-CY1 JF102JJ		lk 1/16W	Metal Oxide A A
R2006	VRS-CY1JF1OZJ	J	lk 1/16W	Metal Oxide AA
R2007	VRS-CY 1JF821JJ		820 1/16W	Metal Oxide AA
R2008	VRS-CY 1 JF102JJ		1k 1/16W	Metal Oxide A A
R2009	VRS-CY1 JF102JJ		1k 1/16W	Metal Oxide A A

Ref. No.	Part No.	*	Description	Code

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MAIN UNIT (Continued)

RESISTORS (Continued)

R2010	VRS-CY1JF271JJ		2 7 0 1/16W	Metal Oxide AA
R2011	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2012	VRS-CY1JF391JJ		3 9 0 1/16W	Metal Oxide AA
R2013	VRS-CY1JF391JJ		3 9 0 1/16W	Metal Oxide AA
R2014	VRS-CY1JF563JJ		56k 1/16W	Metal Oxide A A
R2015	VRS-CY 1 JF473JJ		47k 1/16W	Metal Oxide A A
R2016	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2017	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2018	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2021	VRS-CY1JF103JJ		10k 1/16W	Metal Oxide A A
R2022	VRS-TV1JD562FJ		5.6k 1/16W	Metal Oxide A A
R2023	VRS-TV1JD103FJ		10k 1/16W	Metal Oxide A A
R2024	VRS-TV1JD103FJ		10k 1/16W	Metal Oxide A A
R2025	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2026	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2027	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2028	VRS-CY 1 JF473JJ		47k 1/16W	Metal Oxide A A
R2029	VRS-CY 1 JF473JJ		47k 1/16W	Metal Oxide A A
R2030	VRS-CY1JF473JJ		47k 1/16W	Metal Oxide A A
R2031	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2032	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2033	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2034	VRS-CY1 JF1 02J	J	1k 1/16W	Metal Oxide AA
R2035	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2037	VRS-TX2HF5R6JJ		5 . 6 1/2W	Metal Oxide A A
R2038	VRS-CY1 JF471 JJ		470 1/16W	Metal Oxide A A
R2039	VRS-CY1 JF471 JJ		470 1/16W	Metal Oxide A A
R2040	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2041	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2042	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2043	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2044	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2045	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2046	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2047	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2048	VRS-CY1JF273JJ		27k 1/16W	Metal Oxide A A
R2049	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2050	VRS-CY1JF333JJ		33k 1/16W	Metal Oxide AA
R2051	VRS-CY 1 JF333JJ		33k 1/16W	Metal Oxide A A
R2063	VRS-CY1JF563JJ		56k 1/16W	Metal Oxide A A
R2064	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2065	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2066	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2067	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2068	VRS-CY1JF183JJ		18k 1/16W	Metal Oxide AA
R2069	VRS-CY1JF182J	J	1.8k 1/16W	Metal Oxide AA
R2070	VRS-CY1JF102JJ	I	k 1/16W	Metal Oxide AA
R2062	*See Controls*			
R2063	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2064	VRS-CY1JF332J	J	3.3k 1/16W	Metal Oxide AA
R2065	VRS-CY1JF101J	J	100 1/16W	Metal Oxide AA

Ref. No.	Part No.	*	Description	Code

RESISTORS (Continued)

R2066	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2067	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2068	VRS-CY1JF471JJ		4 7 0 1/16W	Metal Oxide AA
R2069	VRS-CY 1 JF473JJ		47k 1/16W	Metal Oxide AA
R2070	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2071	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2072	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2074	VRS-CY1JF103JJ		10k 1/16W	Metal Oxide A A
R2075	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2076	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2079	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2081	VRS-CY1JF472JJ		4.7k 1/16W	Metal Oxide A A
R2082	VRS-CY 1 JF10 1JJ		100 1/16W	Metal Oxide AA
R2083	VRS-CY1JF102J	J	1k 1/16W	Metal Oxide AA
R2084	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2085	VRS-CY1JF472J	J	4.7k 1/16W	Metal Oxide AA
R2086	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2087	VRS-CY1 JF472JJ		4.7k 1/16W	Metal Oxide AA
R2088	VRS-CY1JF473JJ		47k 1/16W	Metal Oxide A A
R2089	VRS-CY 1 JF473JJ		47k 1/16W	Metal Oxide AA
R2090	VRS-CY 1 JF473JJ		47k 1/16W	Metal Oxide A A
R2091	VRS-CY1JF473JJ		47k 1/16W	Metal Oxide AA
R2092	VRS-CY1JF393JJ		39k 1/16W	Metal Oxide A A
R2093	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2094	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2095	VRS-CY1JF473JJ		47k 1/16W	Metal Oxide AA
R2096	VRS-CY1JF393JJ		39k 1/16W	Metal Oxide AA
R2097	VRS-CY1JF332J	J	3.3k 1/16W	Metal Oxide AA
R2098	VRS-CY1JF822JJ		8.2k 1/16W	Metal Oxide A A
R2099	VRS-CY1JF822JJ		8.2k 1/16W	Metal Oxide A A
R2100	VRS-CY1JF822JJ		8.2k 1/16W	Metal Oxide A A
R2101	VRS-CY1JF123J	J	12k 1/16W	Metal Oxide AA
R2102	VRS-CY1JF472JJ		4.7k 1/16W	Metal Oxide A A
R2103	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2104	VRS-CY1JF103JJ		10k 1/16W	Metal Oxide A A
R2105	VRS-CY1JF103JJ		10k 1/16W	Metal Oxide A A
R2106	VRS-CY1JF101JJ		1 0 0 1/16W	Metal Oxide AA
R2107	VRS-CY1JF392J	J	3.9k 1/16W	Metal Oxide AA
R2108	VRS-CY 1 JF392JJ		3.9k 1/16W	Metal Oxide A A
R2109	VRS-CY1JF123JJ		12k 1/16W	Metal Oxide AA
R2110	VRS-CY1 JF104J	J	100k 1/16W	Metal Oxide AA
R2112	VRS-CY 1 JF392JJ		3.9k 1/16W	Metal Oxide A A
R2113	VRS-CY1JF103J	J	10k 1/16W	Metal Oxide AA
R2114	VRS-CY1JF473JJ		47k 1/16W	Metal Oxide AA
R2116	VRS-CY 1 JF472JJ		4.7k 1/16W	Metal Oxide A A
R2116	VRS-CY1JF332J	J	3.3k 1/16W	Metal Oxide AA
R2117	VRS-CY1JF392JJ		3.9k 1/16W	Metal Oxide A A
R2118	VRS-CY1JF122J	J	1.2k 1/16W	Metal Oxide AA
R2119	VRS-CY1JF000JJ		0 1/16W	Metal Oxide AA
R2120	VRS-CY1 JF271 JJ		270 1/16W	Metal Oxide AA
R2121	VRS-CY1JF122J	J	1.2k 1/16W	Metal Oxide AA
R2122	VRS-CY1JF000JJ		0 1/16W	Metal Oxide AA
R2123	VRS-CY1JF271JJ		270 1/16W	Metal Oxide AA
R2124	VRS-CY 1 JF392JJ		3.9k 1/16W	Metal Oxide A A

Ref. No.	Part No.	★	Description	Code

DSETU1432DE01
MAIN UNIT (Continued)

RESISTORS (Continued)

R2125	VRS-CY 1 JF1 22J J	1.2k	1/16W	Metal Oxide	AA
R2126	VRS-CY1JF000J J	0	1/16W	Metal Oxide	AA
R2127	VRS-CY1JF271JJ	2 7 0	1/16W	Metal Oxide	AA
R2128	VRS-CY1JF222JJ	2.2k	1/16W	Metal Oxide	AA
R2129	VRS-CY1JF122J J	1.2k	1/16W	Metal Oxide	AA
R2130	VRS-CY1JF000J J	0	l/l 6W	Metal Oxide	AA
R2131	VRS-CY 1 JF392JJ	3.9k	1/16W	Metal Oxide	AA
R2132	VRS-CY 1 JF472JJ	4.7k	1/16W	Metal Oxide	AA
R2133	VRS-CY 1 JF184JJ	180k	1/16W	Metal Oxide	AA
R2135	VRS-CY1JF102J J I	k	1/16W	Metal Oxide	AA
R2136	VRS-CY 1 JF472JJ	4.7k	1/16W	Metal Oxide	AA
R2137	VRS-CY1JF103J J	10k	1/16W	Metal Oxide	A A
R2138	VRS-CY1JF561JJ	5 6 0	1/16W	Metal Oxide	AA
R2139	See Controls				
R2140	VRS-CY 1 JF471JJ	470	1/16W	Metal Oxide	A A
R2141	VRS-CY 1 JF682JJ	6.8k	1/16W	Metal Oxide	A A
R2144	VRS-CY1JF102J J I	k	1/16W	Metal Oxide	AA
R2145	VRS-CY1JF101JJ	1 0 0	1/16W	Metal Oxide	AA
R2146	VRS-CY 1 JF682JJ	6.8k	1/16W	Metal Oxide	A A
R2147	VRS-CY1JF682JJ	6.8k	1/16W	Metal Oxide	A A
R2148	VRS-CY1 JF103J J	10k	1/16W	Metal Oxide	AA
R2149	VRS-CY1JF333JJ	3 3 k	1/16W	Metal Oxide	A A
R2150	VRS-CY1JF333JJ	3 3 k	1/16W	Metal Oxide	AA
R2151	VRS-CY1JF333JJ	3 3 k	1/16W	Metal Oxide	AA
R2152	VRS-CY1JF473JJ	4 7 k	1/16W	Metal Oxide	A A
R2153	VRS-CY1JF101JJ	1 0 0	1/16W	Metal Oxide	AA
R2154	VRS-CY1JF223JJ	22k	1/16W	Metal Oxide	A A
R2155	VRS-CY 1 JF392FJ	3.9k	1/16W	Metal Oxide	A A
R2156	VRS-TV1JD162F J.	1.6k	1/16W	Metal Oxide	AA
R2157	VRS-CY1JF102J J I	k	1/16W	Metal Oxide	AA
R2158	VRS-CY1JF102J J I	k	1/16W	Metal Oxide	AA
R2160	VRS-CY1JF473JJ	4 7 k	1/16W	Metal Oxide	A A

Ref. No.	Part No.	★	Description	Code

SWITCHS

S1001	QSW-K0098CEZZ J			AC
S2001	QSW-P0577CEZZ J			AE
S2002	QSW-K0065GEZZ J	DAC(+)		AC
52003	QSW-K0065GEZZJ	P-Mode		AC
S2004	QSW-K0065GEZZ J	Volume(-)		AC
S2005	QSW-K0065GEZZJ	Volume(+)		AC
S2006	QSW-K0065GEZZJ	A N		AC
S2007	QSW-K0065GEZZJ	Revers		AC
52008	QSW-K0065GEZZJ	B/B		AC
S2009	QSW-K0065GEZZJ	Mode		AC
S2010	QSW-K0065GEZZJ	System		AC
S2011	QSW-K0065GEZZ J			AC
S2012	QSW-B0022CEZZ J	Lamp Cover		AE

MISCELLANEOUS PARTS

FB2001	RBLN-0065CEZZ J	Ferrite Bead		AB
J401	QTANJ0935CEZZ J	AV Jack		AS
P901	QPLGN0264TAZZ J	Plug 2-pin, (BA)		AC
	QPLGN0280GEZZ J	Plug 2-pin, (SP)		AB
	QPLGN0295CEZZ J	Plug 2-pin		AR
	QPLGN0364TAZZ J	Plug 3-pin, (RA)		AC
P1501	QPLGN0464TAZZ J	Plug 4-pin, (EB)		AC
P1502	QPLGN0764TAZZ J	Plug 7-pin, (DS)		AD
P1503	QPLGN0778GEZZ J	Plug 7-pin, (DH)		AC
	QPLGN2243CEZZ J	Plug 22-pin, (LA)		AE

— End of MAIN UNIT. —

Ref. No.	Part No.	★	Description	Code

DUNTK7780DE01
SUB UNIT

INTEGRATED CIRCUITS

IC1401	VHiNJM318M/-1 J	NJM318M		AC
IC1402	VHiNJM318M/-1 J	NJM318M		AG
IC1403	VHiTC4053BF-1 J	TC4053BF		AG
IC1404	VHiNJM318M/-1 J	NJM318M		AG
ICI 405	VHiNJM318M/-1 J	NJM318M		AG
IC1406	VHiTC4053BF-1 J	TC4053BF		AC
IC1407	VHiNJM318M/-1 J	NJM318M		AG
ICI 408	VHiNJM318M/-1 J	NJM318M		AC

TRANSISTORS

Q504	VS2SC3265Y/-1 J	2SC3265Y		AB
Q505	VS2SA1 298Y/-1 J	2SA1298Y		AB
Q506	VSBC847B1 F/-1 J	BC847B1F		AA
4 1 4 0 1	VSBC847B1 F/-I J	BC847B1F		AA
Q1402	VSBC857B3F/-1 J	BC857B3F		AA
4 1 4 0 3	VSBC847B1 F/-I J	BC847B1F		AA
4 1 4 0 4	VSBC857B3F/-1 J	BC857B3F		AA
9 1 4 0 5	VSBC847B1 F/-I J	BC847B1F		AA
Q1406	VSBC857B3F/-1 J	BC857B3F		AA
4 1 4 0 7	VSBC847B1 F/-I J	BC847B1F		AA
Q1408	VSBC857B3F/-1 J	BC857B3F		AA
Q1409	VSBC847B1 F/-1 J	BC847B1F		AA
4 1 4 1 0	VSBC857B3F/-1 J	BC857B3F		AA
4 1 4 1 1	VSBC847B1 F/-I J	BC847B1F		AA
Q1412	VSBC857B3F/-1 J	BC857B3F		AA
41413	VSBC847B1 F/-I J	BC847B1F		AA
4 1 4 1 4	VSBC857B3F/-1 J	BC857B3F		AA
4 1 4 1 5	VSBC847B1 F/-I J	BC847B1F		AA
Q1416	VSBC857B3F/-1 J	BC857B3F		AA
4 1 4 1 7	VSBC847B1 F/-I J	BC847B1F		AA
Q1418	VSBC857B3F/-1 J	BC857B3F		AA
Q1419	VSBC847B1 F/-1 J	BC847B1F		AA
Q1420	VSBC857B3F/-1 J	BC857B3F		AA
Q1421	VSBC847B1 F / - I J	BC847B1F		AA
Q1422	VSBC857B3F/-1 J	BC857B3F		AA
Q1423	VSBC847B1 F / - I J	BC847B1F		AA
Q1424	VSBC857B3F/-1 J	BC857B3F		AA
Q1425	VSBC847B1 F/-I J	BC847B1F		AA
Q1426	VSBC857B3F/-1 J	BC857B3F		AA
Q1427	VSBC847B1 F / - I J	BC847B1F		AA
Q1428	VSBC857B3F/-1 J	BC857B3F		AA
Q1429	VSBC847B1 F / - I J	BC847B1F		AA
4 1 4 3 0	VSBC857B3F/-1 J	BC857B3F		AA
4 1 4 3 1	VSBC847B1 F/-I J	BC847B1F		AA
Q1432	VSBC857B3F/-1 J	BC857B3F		AA
4 1 4 3 3	VSBC847B1 F/-I J	BC847B1F		AA
4 1 4 3 4	VSBC857B3F/-1 J	BC857B3F		AA
Q 1 4 3 5	VSBC847B1 F/-I J	BC847B1F		AA
Q1436	VSBC857B3F/-1 J	BC857B3F		AA

Ref. No.	Part No.	★	Description	Code

DIODES

D1401	VHDMA143///-1 J			AB
D 1 4 0 2	VHDMA143///-1J			AB
D 1 4 0 3	VHDMA143///-1J			AB
D 1 4 0 4	VHDMA143///-1J			AB
D 1 4 0 5	VHDMA143///-1J			AB
D 1 4 0 6	VHDMA143///-1J			AB

COILS

L501	VP-1M101K7R7N J	Peaking Coil, 100μH		AC
L502	VP-1M101K7R7N J	Peaking Coil, 100μH		AC
L503	VP-1M101K7R7N J	Peaking Coil, 100μH		AC
L504	V P - I M101K7R7N J	Peaking Coil, 100μH		AC

CONTROLS

R820	RVR-M7895TAZZ J	1k(B)	Com. Bias Adj.	AC
R 1 4 3 4	RVR-M7901TAZZ J	10k(B)	RGB Sub Adj.	AC

CAPACITORS

C506	VCEAPH1HW105M J	1	50V	Electrolytic	AB
C507	VCEAPF1CW226M J	2 2	16V	Electrolytic	AB
C508	VCEAPH1CW106M J	10	16V	Electrolytic	AB
C509	VCEAPF1EW106M J	1 0	25V	Electrolytic	AB
C510	VCEAPH1CW106M J	10	16V	Electrolytic	AB
C511	VCEAPH1CW106M J	1 0	16V	Electrolytic	AB
C512	VCEAPH1CW106M J	1 0	16V	Electrolytic	AB
c513	VCEAPH1CW106M J	1 0	16V	Electrolytic	AB
C515	VCKYCY1CF104Z J	0.1	16V	Ceramic	AA
CI401	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
CI 402	VCCCCY1HH6R0D J	6p	50V	Ceramic	AA
CI 403	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
CI404	VCCCCY1HH6R0D J	6p	50V	Ceramic	AA
CI 405	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
CI407	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
CI408	VCCCCY1HH6R0D J	6p	50V	Ceramic	AA
CI409	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
C1410	VCCCCY1HH6R0D J	6p	50V	Ceramic	AA
C1411	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
CI412	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
C1413	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
CI414	VCCCCY1HH6R0D J	6p	50V	Ceramic	AA
CI415	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
CI416	VCCCCY1HH6R0D J	6p	50V	Ceramic	AA
C1417	VCEAPF1CW226M J	2 2	16V	Electrolytic	AB
CI418	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
C1419	VCEAPF1CW226M J	2 2	16V	Electrolytic	AB
C1420	VCKYCY1EB103K J	0.01	25V	Ceramic	AA
C1423	VCEAPF1CW226M J	2 2	16V	Electrolytic	AB
C1424	VCEAPF1EW226M J	2 2	25V	Electrolytic	AB

Ref. No.	Part No.	*	Description	Code

DUNTK7780DE01
SUB UNIT (Continued)

CAPACITORS (Continued)

CI425	VCKYCY1CF104ZJ		0.1 16V Ceramic	AA
CI426	VCKYCY1CF104ZJ		0.1 16V Ceramic	AA
CI427	VCKYCY1CF104ZJ		0.1 16V Ceramic	AA
CI428	VCKYCY1CF104ZJ		0.1 16V Ceramic	AA
CI429	VCKYCY1CF104ZJ		0.1 16V Ceramic	AA
CI430	VCEAPH1CW106MJ		1 0 16V Electrolytic	AB
CI431	VCEAPH1CW106MJ		1 0 16V Electrolytic	AB
CI432	VCEAPH1CW106MJ		1 0 16V Electrolytic	AB
CI433	VCEAPH1CW106MJ		1 0 16V Electrolytic	AB
CI 434	VCEAPH1CW106MJ		1 0 16V Electrolytic	AB
CI435	VCKYCY1EB103KJ		0.01 25V Ceramic	AA
CI436	VCCCCY1HH120JJ		12p 50V Ceramic	AA
CI437	VCKYCY1CF104ZJ		0.1 16V Ceramic	AA
CI438	VCKYCY1CF104ZJ		0.1 16V Ceramic	AA

RESISTORS

R514	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R517	VRS-CY 1 JF6R8JJ		6.8 1/16W Metal Oxide	AA
R518	VRS-CY1JF152J		J 1.5k 1/16W Metal Oxide	AA
R519	VRS-CY1JF332J		J 3.3k 1/16W Metal Oxide	AA
R520	*See Controls*			
R521	VRS-CY1JF222J		J 2.2k 1/16W Metal Oxide	AA
R522	VRS-CY 1 JF562JJ		5.6k 1/16W Metal Oxide	AA
R523	VRS-CY1 JF472J		J 4.7k 1/16W Metal Oxide	AA
R525	VRS-CY1JF822J		J 8.2k 1/16W Metal Oxide	AA
R526	VRS-TX2HF5R6JJ		5 . 6 1/2W Metal Oxide	AA
R530	VRS-CY 1 JFI 02JJ		1k 1/16W Metal Oxide	A A
R532	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R534	VRS-CY1JF102J		J 1k 1/16W Metal Oxide	AA
R535	VRS-TV1 JD5R6JJ		5.6 1/16W Metal Oxide	AA
R536	VRS-TV1 JD5R6JJ		5.6 1/16W Metal Oxide	AA
R537	VRS-TV1 JD5R6JJ		5.6 1/16W Metal Oxide	AA
R538	VRS-TV1 JD5R6JJ		5.6 1/16W Metal Oxide	AA
R539	VRS-TV1 JD5R6JJ		5.6 1/16W Metal Oxide	AA
R540	VRS-TV1 JD5R6JJ		5.6 1/16W Metal Oxide	AA
R542	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R543	VRS-CY1JF101J		J 100 1/16W Metal Oxide	AA
R544	VRS-CY1JF3R3JJ		3 . 3 1/16W Metal Oxide	AA
R545	VRS-CY1JF3R3JJ		3 . 3 1/16W Metal Oxide	AA
R546	VRS-CY1JF472J		J 4.7k 1/16W Metal Oxide	A A
RI401	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1402	VRS-TV1JD392JJ		3.9k 1/16W Metal Oxide	A A
R1404	VRS-TV1JD272JJ		2.7k 1/16W Metal Oxide	AA
R1406	VRS-TV1JD102FJI		k 1/16W Metal Oxide	AA
R1407	VRS-CY1JF392JJ		3.9k 1/16W Metal Oxide	AA
RI408	VRS-CY1JF332J		J 3.3k 1/16W Metal Oxide	AA
R1410	VRS-CY1JF332J		J 3.3k 1/16W Metal Oxide	AA
R1411	VRS-CY1JF392J		J 3.9k 1/16W Metal Oxide	AA
R1412	VRS-TV1JD102F		J 1k 1/16W Metal Oxide	AA

RESISTORS (Continued)

R1415	VRS-TV1 JD392JJ		3.9k 1/16W Metal Oxide	AA
R1417	VRS-TV1 JD272FJ		2.7k 1/16W Metal Oxide	AA
R1418	VRS-TV1JD102FJI		k 1/16W Metal Oxide	AA
R1419	VRS-TV1JD102F		J 1k 1/16W Metal Oxide	AA
R1420	VRS-CY1JF392J		J 3.9k 1/16W Metal Oxide	AA
R1421	VRS-CY1 JF332J		J 3.3k 1/16W Metal Oxide	AA
R1422	VRS-CY1JF332J		J 3.3k 1/16W Metal Oxide	AA
R1423	VRS-CY1JF332J		J 3.3k 1/16W Metal Oxide	AA
R1424	VRS-CY1JF392J		J 3.9k 1/16W Metal Oxide	AA
R1428	VRS-TV1JD392J		J 3.9k 1/16W Metal Oxide	AA
R1430	VRS-TV1JD272J		J 2.7k 1/16W Metal Oxide	AA
R1432	VRS-TV1JD102FJI		k 1/16W Metal Oxide	AA
R1433	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R1434	*See Controls*			
R1435	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R1436	VRS-CY1JF392J		J 3.9k 1/16W Metal Oxide	AA
RI437	VRS-TV1JD103F		J 10k 1/16W Metal Oxide	AA
R1439	VRS-TV1 JD103FJ		10k 1/16W Metal Oxide	A A
R1440	VRS-CY 1 JF392JJ		3.9k 1/16W Metal Oxide	AA
R1441	VRS-TX2HF682JJ		6.8k 1/2W Metal Oxide	A A
R1442	VRS-TV1 JD470JJ		47 1/16W Metal Oxide	AA
R1443	VRS-TV1 JD470JJ		47 1/16W Metal Oxide	AA
R1444	VRS-TV1 JD1 OOJ J		10 1/16W Metal Oxide	AA
R1445	VRS-TV1JD1 O O J J		10 1/16W Metal Oxide	A A
R1446	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1447	VRS-CY1JF102JJI		k 1/16W Metal Oxide	AA
R1448	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
RI449	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R1450	VRS-TX2HF682J		J 6.8k 1/2W Metal Oxide	AA
R1451	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	AA
RI 452	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	AA
R1453	VRS-TV1 JD1 OOJ J		10 1/16W Metal Oxide	AA
RI 454	VRS-TV1 JD1 OOJ J		10 1/16W Metal Oxide	AA
R1455	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1456	VRS-CY 1 JF102JJ		1k 1/16W Metal Oxide	AA
RI457	VRS-CY1JF101J		J 100 1/16W Metal Oxide	AA
R1458	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R1459	VRS-TX2HF682J		J 6.8k 1/2W Metal Oxide	AA
R1460	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	AA
R1461	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	AA
R1462	VRS-TV1JD100JJ		1 0 1/16W Metal Oxide	AA
R1463	VRS-TV1JD100J		J 10 1/16W Metal Oxide	AA
R1464	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
RI465	VRS-CY1JF102JJI		k 1/16W Metal Oxide	AA
R1466	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1467	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R1468	VRS-TX2HF682JJ		6.8k 1/2W Metal Oxide	A A
RI469	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	A A
RI470	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	AA
RI471	VRS-TV1JD1 OOJ J		10 1/16W Metal Oxide	A A
RI472	VRS-TV1JD100JJ		1 0 1/16W Metal Oxide	AA
R1473	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1474	VRS-CY1JF102J		J 1k 1/16W Metal Oxide	AA
R1475	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA

Ref. No.	Part No.	*	Description	Code

DUNTK7780DE01
SUB UNIT (Continued)

RESISTORS (Continued)

R1476	VRS-CY1JF103J		J 10k 1/16W Metal Oxide	AA
R1477	VRS-TX2HF682JJ		6.8k 1/2W Metal Oxide	A A
R1478	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	A A
R1479	VRS-TV1 JD470JJ		47 1/16W Metal Oxide	A A
R1480	VRS-TV1JD100JJ		1 0 1/16W Metal Oxide	AA
R1481	VRS-TV1JD100JJ		1 0 1/16W Metal Oxide	AA
R1482	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1483	VRS-CY1JF102J		J 1k 1/16W Metal Oxide	AA
R1484	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1485	VRS-CY1 JF103J		J 10k 1/16W Metal Oxide	AA
R1486	VRS-TX2HF682JJ		6.8k 1/2W Metal Oxide	A A
R1487	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	A A
R1488	VRS-TV1JD470JJ		4 7 1/16W Metal Oxide	A A
R1489	VRS-TV1JD100JJ		1 0 1/16W Metal Oxide	AA
R1490	VRS-TV1JD100J		J 10 1/16W Metal Oxide	AA
R1491	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1492	VRS-CY1JF102J		J 1k 1/16W Metal Oxide	AA
R1493	VRS-CY1JF101JJ		1 0 0 1/16W Metal Oxide	AA
R1495	VRS-CY1 JF123J		J 12k 1/16W Metal Oxide	AA
R1496	VRS-TV1JD102FJI		k 1/16W Metal Oxide	AA
R1497	VRS-CY1JF103JJ		10k 1/16W Metal Oxide	A A
R1498	VRS-CY1JF332J		J 3.3k 1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

P501	QPLGN2243CEZZ	J Plug 22pin, (LA)	AE
SC1401	QSOCN3048TAZZ	J Socket 30pin, (LC)	AF

—— End of SUB UNIT ——

DUNTK7781DE01
BIMETAL UNIT

MISCELLANEOUS PARTS

	RBiM-0006CEZZJ	Bimetal	AK
	QCNW-3341 CEZZ	J Connecting Wire, (BA)	AD

—— End of BIMETAL UNIT ——

DUNTK7782DE01
DIGITAL UNIT

INTEGRATED CIRCUITS

IC1001	RH-iX2147CEZZ	J	BA
IC1002	VHiMB40568/-1	J MB40568PF	AW
IC1003	VHiMB40568/-1	J MB40568PF	AW
IC1004	VHiMB40568/-1	J MB40568PF	AW
IC1005	RH-iX2063CEZZ	J UPD42102G-3	AU
IC1006	RH-iX2063CEZZ	J UPD42102G-3	AU
IC1007	RH-iX2063CEZZ	J UPD42102G-3	AU
IC1008	RH-iX2063CEZZ	J UPD42102G-3	AU
IC1009	RH-iX2063CEZZ	J UPD42102G-3	AU
IC1010	RH-iX2063CEZZ	J UPD42102G-3	AU
IC1011	VHiMB40978F-1	J MB40978PFQ	Ax
IC1012	VHiTC4538AF-1	J TC74HC4538AF	AH
IC1013	VHiTC4538AF-1	J TC74HC4538AF	AH
IC1018	VHiNJM2107F-1	J NJM2107F	AE
IC1019	VHiNJM2107F-1	J NJM2107F	AE

TRANSISTORS

Q1001	VSBC857B3F/-1	J BC857B3F	AA
Q1002	VSBC847B1F/-1	J BC847B1F	AA
41003	VSBC847B1F/-1	J BC847B1F	AA
Q1004	VSBC847B1F/-1	J BC847B1F	AA
Q1005	VSBC857B3F/-1	J BC857B3F	AA
Q1006	VSBC847B1F/-1	J BC847B1F	AA
Q1008	VSBC857B3F/-1	J BC857B3F	AA
Q1009	VSBC847B1F/-1	J BC847B1F	AA
Q1010	VSBC847B1F/-1	J BC847B1F	AA
Q1011	VSBC847B1F/-1	J BC847B1F	AA
Q1012	VSBC857B3F/-1	J BC857B3F	AA
Q1013	VSBC847B1F/-1	J BC847B1F	AA
Q1015	VSBC857B3F/-1	J BC857B3F	AA
Q1016	VSBC847B1F/-1	J BC847B1F	AA
Q1017	VSBC847B1F/-1	J BC847B1F	AA
Q1018	VSBC847B1F/-1	J BC847B1F	AA
Q1019	VSBC857B3F/-1	J BC857B3F	AA
41020	VSBC847B1F/-1	J BC847B1F	AA
41022	VSBC847B1 F/-1	J BC847B1F	AA
Q1023	VSBC847B1 F/-1	J BC847B1F	AA
Q1024	VSBC847B1F/-1	J BC847B1F	AA
Q1025	VSBC857B3F/-1	J BC857B3F	AA
Q1026	VSBC857B3F/-1	J BC857B3F	AA
Q1027	VSBC847B1F/-1	J BC847B1F	AA
Q1028	VSBC847B1 F/-1	J BC847B1F	AA
Q1029	VSBC857B3F/-1	J BC857B3F	AA
Q1030	VSBC857B3F/-1	J BC857B3F	AA
Q1031	VSBC847B1F/-1	J BC847B1F	AA
Q1032	VSBC847B1 F/-1	J BC847B1F	AA
Q1033	VSBC857B3F/-1	J BC857B3F	AA
Q1432	VSBC857B3F/-1	J BC857B3F	AA

Ref. No.	Part No.	*	Description	Code

DUNTK7782DE01
DIGITAL UNIT (Continued)

DIODES

01001	VHDDAN202U/-1	J	AA
D1002	VHDDAN202U/-1	J	AA
D1003	VHDDAN202U/-1	J	AA
01004	VHD1SV217//-1	J	AB
01005	VHD1SV217//-1	J	AB
01008	RH-EX0516CEZZ	J	Zener Diode AB

COILS AND FILTERS

FL1001	RFILN0097GEZZ	J	Filter AF
FL1002	RFILN0097GEZZ	J	Filter AF
FL1003	RFILN0097GEZZ	J	Filter AF
FL1004	RCILF0214CEZZ	J	LowPassFilter AF
FL1005	RCILF0214CEZZ	J	LowPassFilter AF
FL1006	RCILF0214CEZZ	J	LowPassFilter AF
FL1007	RCILF0215CEZZ	J	LowPassFilter AF
FL1008	RCILF0215CEZZ	J	LowPassFilter AF
FL1009	RCILF0215CEZZ	J	LowPassFilter AF
FL1010	RFILN0080GEZZ	J	Filter AD
FL1011	RFILN0080GEZZ	J	Filter AD
FL1012	RFILN0080GEZZ	J	Filter AD
FL1013	RFILN0080GEZZ	J	Filter AD
FL1014	RFILN0080GEZZ	J	Filter AD
FL1015	RFILN0080GEZZ	J	Filter AD
FL1016	RFILN0080GEZZ	J	Filter AD
FL1017	RFILN0080GEZZ	J	Filter AD
FL1018	RFILN0080GEZZ	J	Filter AD
FL1020	RFILN0080GEZZ	J	Filter AD
FL1021	RFILN0097GEZZ	J	Filter AF
FL1022	RFILN0097GEZZ	J	Filter AF
FL1023	RFILN0097GEZZ	J	Filter AF
FL1024	RFILN0097GEZZ	J	Filter AF
FL1025	RFILN0080GEZZ	J	Filter AD
L1001	RCILB0066CEZZ	J	Coil, Vco 1 Adj. AC
L1002	RCILB0065CEZZ	J	Coil, Vco 2 Adj. AC

CONTROL

R1119	RVR-M7899TAZZ	J	H-Sync Phase adj. AC

CAPACITORS

C1001	VCEAPF1CW476M	J	4 7 16V Electrolytic AC
C1002	VCEAPF1CW476M	J	4 7 16V Electrolytic AC
C1003	VCEAPF1CW476M	J	4 7 16V Electrolytic AC
C1004	VCEAPF1CW476M	J	4 7 16V Electrolytic AC
C1005	VCEAPF1AW476M	J	4 7 10V Electrolytic AB

Ref. No.	Part No.	•	Description	Code

CAPACITORS (Continued)

C1006	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1007	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1008	VCE9PF1CW475M	J	4 . 7 16 V Elect. (N.P) A C
C1009	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1010	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1011	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1012	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1013	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1014	VCE9PF1CW475M	J	4 . 7 16V Elect. (N.P) AC
C1015	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1016	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1017	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1018	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1019	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1020	VCE9PF1CW475M	J	4 . 7 16V Elect. (N.P) AC
C1021	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1022	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1023	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1024	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1026	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1028	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1030	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1031	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1032	VCEAPH1HW105M	J	1 50V Electrolytic AB
C1033	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1034	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1035	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1036	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1037	VCKYCY1HB102K	J	1000p 50V Ceramic AA
C1038	VCKYCY1HB102K	J	1000p 50V Ceramic AA
C1039	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1040	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1041	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1042	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1043	VCKYTV1EF104Z	J	0 . 1, 25V Ceramic AB
C1044	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1047	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1048	VCCCTV1HH681J	J	680p 50V Ceramic AB
C1050	VCCCTV1HH561J	J	560p 50V Ceramic AA
C1051	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1054	VCCCTV1HH101J	J	100p 50V Ceramic AA
C1055	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1056	VCCCTV1HH561J	J	560p 50V Ceramic AA
C1057	VCKYTV1HF104Z	J	0 . 1 50V Ceramic AA
C1058	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1059	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1060	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1061	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1062	VCKYTV1EF104Z	J	0 . 1 25V Ceramic AB
C1063	VCCCTV1HH102J	J	1000p 50V Ceramic AA
C1064	VCCCTV1HH102J	J	1000p 50V Ceramic AA
C1065	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1066	VCEAPF1AW476M	J	4 7 10V Electrolytic AB
C1067	VCEAPF1CW476M	J	4 7 16V Electrolytic AC

Ref. No.	Part No.	*	Description	Code

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DIGITAL UNIT (Continued)

CAPACITORS(Continued)

C1068	VCEAPF1CW476M	J	4 7 16V Electrolytic AC
C1069	VCEAPF1EW475M	J	4 . 7 25V Electrolytic AB
CI 070	VCKYTV1HB102K	J	1000p 50V Ceramic AA

RESISTORS

R1001	VRS-CY1JF153J	J	1 5 k 1/16W Metal Oxide AA
R1002	VRS-CY 1 JF473J	J	47k 1/16W Metal Oxide AA
R1003	VRS-CY 1JF391J	J	390 1/16W Metal Oxide AA
R1004	VRS-CY 1 JF561J	J	560 1/16W Metal Oxide AA
R1005	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1006	VRS-CY1JF391J	J	3 9 0 1/16W Metal Oxide AA
R1007	VRS-CY1JF102J	J	I k 1/16W Metal Oxide AA
R1008	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide AA
R1009	VRS-CY1JF561J	J	5 6 0 1/16W Metal Oxide AA
R1010	VRS-CY1JF105J	J	1M 1/16W Metal Oxide AA
R1011	VRS-CY 1 JF102J	J	1k 1/16W Metal Oxide AA
R1012	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide AA
R1015	VRS-CY1JF560J	J	5 6 1/16W Metal Oxide AA
R1016	VRS-CY1JF153J	J	1 5 k 1/16W Metal Oxide AA
R1017	VRS-CY 1 JF473J	J	47k 1/16W Metal Oxide AA
R1018	VRS-CY1JF391J	J	3 9 0 1/16W Metal Oxide AA
R1019	VRS-CY1 JF561 J	J	560 1/16W Metal Oxide AA
R1020	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1021	VRS-CY1JF391J	J	3 9 0 1/16W Metal Oxide AA
R1022	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1023	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide AA
R1024	VRS-CY 1 JF561J	J	560 1/16W Metal Oxide AA
R1025	VRS-CY1JF105J	J	1M 1/16W Metal Oxide AA
R1026	VRS-CY 1 JF102J	J	1k 1/16W Metal Oxide AA
R1027	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide AA
R1030	VRS-CY 1 JF560J	J	56 1/16W Metal Oxide AA
R1031	VRS-CY1JF153J	J	15k 1/16W Metal Oxide AA
R1032	VRS-CY 1 JF473J	J	47k 1/16W Metal Oxide AA
R1033	VRS-CY1 JF391 J	J	390 1/16W Metal Oxide AA
R1034	VRS-CY 1 JF561 J	J	560 1/16W Metal Oxide AA
R1035	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1036	VRS-CY1 JF391 J	J	390 1/16W Metal Oxide AA
R1037	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1038	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide AA
R1039	VRS-CY1JF561J	J	5 6 0 1/16W Metal Oxide AA
R1040	VRS-CY1JF105J	J	1M 1/16W Metal Oxide AA
R1041	VRS-CY 1 JF102J	J	1k 1/16W Metal Oxide AA
R1042	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide AA
R1045	VRS-CY 1 JF560J	J	56 1/16W Metal Oxide AA
R1047	VRS-CY 1 JF221J	J	220 1/16W Metal Oxide AA
R1048	VRS-CY 1 JF681 J	J	680 1/16W Metal Oxide AA
R1049	VRS-CY 1 JF560J	J	56 1/16W Metal Oxide AA
R1050	VRS-CY 1 JF102J	J	Ik 1/16W Metal Oxide AA
R1051	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA

Ref. No.	Part No.	•	Description	Code

RESISTORS (Continued)

R1053	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide AA
R1054	VRS-CY 1 JF681 J	J	680 1/16W Metal Oxide AA
R1055	VRS-CY1JF391J	J	3 9 0 1/16W Metal Oxide AA
R1056	VRS-CY1JF391J	J	3 9 0 1/16W Metal Oxide AA
R1057	VRS-CY1JF561J	J	5 6 0 1/16W Metal Oxide AA
RI 058	VRS-CY1JF183J	J	18k 1/16W Metal Oxide AA
R1059	VRS-CY1JF393J	J	3 9 k 1/16W Metal Oxide AA
R1061	VRS-CY1JF221J	J	2 2 0 1/16W Metal Oxide AA
R1062	VRS-CY 1 JF681J	J	680 1/16W Metal Oxide AA
R1063	VRS-CY1JF560J	J	5 6 1/16W Metal Oxide AA
R1064	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1065	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1067	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide AA
R1068	VRS-CY1 JF681 J	J	680 1/16W Metal Oxide AA
R1069	VRS-CY 1JF391J	J	390 1/16W Metal Oxide AA
R1070	VRS-CY1JF391J	J	3 9 0 1/16W Metal Oxide AA
R1071	VRS-CY1 JF561 J	J	560 1/16W Metal Oxide AA
R1072	VRS-CY1 JF183J	J	18k 1/16W Metal Oxide AA
R1073	VRS-CY1JF393J	J	3 9 k 1/16W Metal Oxide AA
R1075	VRS-CY1JF221J	J	2 2 0 1/16W Metal Oxide AA
R1076	VRS-CY1JF681J	J	6 8 0 1/16W Metal Oxide AA
R1077	VRS-CY1JF560J	J	5 6 1/16W Metal Oxide AA
R1078	VRS-CY1JF102J	J	1k 1/16W Metal Oxide AA
R1079	VRS-CY1JF102J	J	I k 1/16W Metal Oxide AA
R1081	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide AA
R1082	VRS-CY 1 JF681 J	J	680 1/16W Metal Oxide AA
R1083	VRS-CY 1 JF391J	J	390 1/16W Metal Oxide AA
R1084	VRS-CY1JF391J	J	3 9 0 1/16W Metal Oxide AA
R1085	VRS-CY1JF561J	J	5 6 0 1/16W Metal Oxide AA
R1086	VRS-CY1JF183J	J	18k 1/16W Metal Oxide AA
R1087	VRS-CY 1JF393J	J	39k 1/16W Metal Oxide AA
R1088	VRS-CY 1 JF1 53J	J	15k 1/16W Metal Oxide AA
R1089	VRS-CY1JF334J	J	330k1/16W Metal Oxide AA
R1090	VRS-CY1JF184J	J	180k1/16W Metal Oxide AA
R1091	VRS-CY1JF392F	J	3.9k 1/16W Metal Oxide AA
R1092	VRS-CY1JF562F	J	5.6k 1/16W Metal Oxide AA
R1093	VRS-CY1JF105J	J	1M 1/16W Metal Oxide AA
R1094	VRS-CY 1 JF1 24J	J	120k1/16W Metal Oxide AA
R1095	VRS-CY1 JF683J	J	68k 1/16W Metal Oxide AA
R1096	VRS-CY1JF105J	J	1M 1/16W Metal Oxide AA
R1097	VRS-CY1JF183J	J	18k 1/16W Metal Oxide AA
R1098	VRS-CY1 JF683J	J	68k 1/16W Metal Oxide AA
R1099	VRS-CY 1 JF273J	J	27k 1/16W Metal Oxide AA
R1100	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide AA
R1101	VRS-CY 1JF472J	J	4.7k 1/16W Metal Oxide AA
R1102	VRS-CY 1JF563J	J	56k 1/16W Metal Oxide AA
R1103	VRS-CY 1 JF563J	J	56k 1/16W Metal Oxide AA
RI 104	VRS-CY1JF105J	J	1M 1/16W Metal Oxide AA
R1105	VRS-CY1JF103J	J	10k 1/16W Metal Oxide AA
RI 106	VRS-CY 1 JF683J	J	68k 1/16W Metal Oxide AA
R1107	VRS-CY 1 JF105J	J	1M 1/16W Metal Oxide AA
R1108	VRS-CY 1JF682J	J	6.8k 1/16W Metal Oxide AA
R1109	VRS-CY 1 JF683J	J	68k 1/16W Metal Oxide AA
RI110	VRS-CY1JF273J	J	27k 1/16W Metal Oxide AA

Ref. No.	Part No.	★	Description	Code

DUNTK7782DE01
DIGITAL UNIT (Continued)

RESISTORS (Continued)

R1111	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R1112	VRS-CY1JF472JJ		4.7k 1/16W Metal Oxide	AA
R1114	VRS-TW2ED101JJ		100 1/4W Metal Oxide	AA
R1115	VRS-TW2ED101JJ		10 1/4W Metal Oxide	AA
R1116	VRS-CY1JF563JJ		56k 1/16W Metal Oxide	AA
R1117	VRS-CY1JF271JJ		270 1/16W Metal Oxide	AA
R1119	*See Controls*			
R1120	VRS-CY1JF101JJ		100 1/16W Metal Oxide	AA
R1121	VRS-CY1JF472JJ		4.7k 1/16W Metal Oxide	AA
R1122	VRS-CY1JF101JJ		100 1/16W Metal Oxide	AA

SWITCH

S1001	QSW-K0098CEZZ	J	Adj. Process Switch	AC

MISCELLANEOUS PARTS

FB1001	RBLN-0065CEZZ	J	Ferrite Bead	AB
FB1002	RBLN-0065CEZZ	J	Ferrite Bead	AB
FB1003	RBLN-0065CEZZ	J	Ferrite Bead	AB
FB1004	RBLN-0065CEZZ	J	Ferrite Bead	AB
P1001	QPLGN0464TAZZ	J	Plug 4-pin, (EB)	AC
P1002	QPLGN0764TAZZ	J	Plug 7-pin, (DS)	AD
P1003	QPLGN0764TAZZ	J	Plug 7-pin, (DH)	AD

—— End of DIGITAL UNIT ——

RDENC0057CEZZ
POWER UNIT

INTEGRATED CIRCUITS

⚠IC701	95KUCH0078ZZJ	J	M67209	AM
	or			
	95KUCH0097ZZJ	J	ZHMA5194	AM
IC702	95KUCB0095AZ	J	PQ05RF11	AH
IC703	95KUCZ0107ZZ	J	μPC1093J	AF
IC704	95KUCB0031GZ	J	M5F79M12	AG

TRANSISTORS

⚠Q701	95KUAC0225JZ	J	2SC4304-O, Y	AH
⚠Q702	95KUAC0027CK	J	2SC2655-Y (TPE6, C)	AD
Q703	95KUAB0019BZ	J	2SB1094-K	AG
Q704	95KUAZ0004AK	J	BA1F4M-T	AB
Q705	95KUAD0056EZ	J	2SD794-P	AF
Q706	95KUAZ0008AK	J	BN1F4M-T	AB
Q707	95KUAB0019BZ	J	2SB1094-K	AG
Q708	95KUAZ0004AK	J	BA1F4M-T	AB
Q709	95KUAZ0014AK	J	BA1A4M-T	AB
Q710	95KUAZ0014AK	J	BA1A4M-T	AB
Q711	95KUAZ0014AK	J	BA1 MM-T	AB
Q712	95KUAC0152AK	J	2SC2785-T	AB
Q713	95KUAZ0014AK	J	BA1A4M-T	AB

DIODES

⚠DS701	95KUBB0087DZ	J	DSSB60	AR
⚠D701	95KUBC0169DK	J	ERA22-08V1	AD
⚠D702	95KUBA0005KZ	J	1SS55-T4	AB
⚠D703	95KUBC0221AK	J	ERA18-02V1	AC
⚠D704	95KUBA0005KZ	J	1SS55-T4	AB
⚠D705	95KUDA0033DL	J	CR02AM-6-TB	AD
D706	95KUBC0174AB	J	ERB93-02L3	AF
D707	95KUBDAK220C	J	Zener Diode, RD22ESAB2-T4	AB
D709	95KUBC0188AK	J	ERB91-02V1	AD
D712	95KUBC0188AK	J	ERB91-02V1	AD
D713	95KUBDAK100C	J	Zener Diode, RD10ESAB2-T4	AB
D714	95KUBDAK100D	J	Zener Diode, RD10ESAB3-T4	AB
D715	95KUBC0188AK	J	ERB91-02V1	AD
⚠D716	95KUBA0005KZ	J	1SS55-T4	AB
D718	95KUBA0005KZ	J	1SS55-T4	AB
D719	95KUBA0004KZ	J	1SS53-T4	AB
D720	95KUBA0004KZ	J	1SS53-T4	AB
D721	95KUBA0004KZ	J	1SS53-T4	AB
D722	95KUBDAK2R7C	J	Zener Diode, RD2.7ESAB2-T4	AB
D723	95KUBA0004KZ	J	1SS53-T4	AB

Ref. No.	Part No.	★	Description	Code

RDENC0057CEZZ
POWER UNIT (Continued)

DIODES (Continued)

D724	95KUBC0174AB	J	ERB93-02L3	AF
⚠D725	95KUBA0004KZ	J	1SS53-T4	AB
⚠D726	95KUBA0004KZ	J	1SS53-T4	AB
D727	95KPZZ0603ZZ	J	IPS-3002-3	AA

PHOTO COUPLERS

⚠PC701	95KUDC0065LB	J	TLP634 (D4-GB-LFZ) A	K
⚠PC702	95KUDC0065LB	J	TLP634 (D4-GB-LFZ)	AK

COILS AND TRANSFORMER

⚠L701	95K129025009	J	Choke Coil, N810	AQ
⚠L702	95KUKZ0335ZZ	J	SE23T-10250	AP
L703	95KUKZ0432ZZ	J	Choke Coil, LHL08TB220K	AE
L704	95KUKZ0432ZZ	J	Choke Coil, LHL08TB220K	AE
T701	95K129695018	J	TRans., PTTP66	AY

CONTROL

R727	95KUF8A502CM	J	5k	AC

CAPACITORS

⚠C701	95KUGFZ224FEJ	J	0.22 Film	AF
⚠C702	95KUGFZ223FEJ	J	0.022 Film	AE
⚠C703	95KUGCQ222AQ	J	2200p Ceramic	AC
⚠C704	95KUGCQ222AQ	J	2200p Ceramic	AC
⚠C705	95KUGCZ1028V	J	1000p Ceramic	AC
⚠C706	95KUG8Q3318X	J	3 3 0 400V Block	AV
⚠C708	95KUGFQ103F8	J	0.01 400V Film	AC
⚠C709	95KUGFF103BQJ		0.01 Film	AB
⚠C710	95KUGCF1028X	J	1000p Ceramic	AA
⚠C711	95KUGFF473BQJ		0.047 Film	AB
⚠C712	95KUGFF683BQJ		0.068 Film	AB
⚠C713	95KUGAF010LX	J	1 50V Electrolytic	AC
⚠C714	95KUGCZ1028V	J	1000p Ceramic	AC
C716	95KUGAD221FDJ		220 25V Electrolytic	AC
C717	95KUGFF473BQJ		0.047 Film	AB
C718	95KUGAD471PUJ		470 25V Electrolytic	AE
C720	95KUGAD471PUJ		470 25V Electrolytic	AE
C721	95KUGAD101FDJ		100 25V Electrolytic	AC
C722	95KUGCS102AB	J	1000p 500V Ceramic A	B
C723	95KUGAE101JGJ		100 35V Electrolytic	AC
C724	95KUGAE101JGJ		100 35V Electrolytic	AC
C725	95KUGAC470FDJ		47 16V Electrolytic	AB
C727	95KUGAD471PUJ		470 25V Electrolytic	AE

CAPACITORS (Continued)

C728	95KUGAC101FDJ		100 16V Electrolytic	AC
c729	95KUGAB470KFJ		47 10V Electrolytic	AD
C730	95KUGAB471FDJ		470 10V Electrolytic	AC
C732	95KUGAD221FDJ		220 25V Electrolytic	AC
c733	95KUGAD471PUJ		470 25V Electrolytic	AE
c734	95KUGAD101FDJ		100 25V Electrolytic	AC
⚠C735	95KUGFF473BQ	J	0.047 Film	AB

RESISTORS

⚠R701	95KUEEC474BEJ		470k1/2W Carbon	AA
	or			
	95KUEEC474ATJ		470k1/2W Carbon	AA
⚠R703	95UEZ0259ZZ	J	3D-22	AP
⚠R705	95KUEFE563AVJ		56k 2W Metal	AC
⚠R706	95KUEFD393BHJ		39k 1W Metal	AB
⚠R707	95KUEFD393BHJ		39k 1W Metal	AB
⚠R708	95KUEFD393BHJ		39k 1W Metal	AB
⚠R709	95KUEEC824BEJ		820k1/2W Carbon	AA
	or			
	95KUEEC824ATJ		820k1/2W Carbon	AA
⚠R710	95KUEEC824BEJ		820k1/2W Carbon	AA
	or			
	95KUEEC824ATJ		820k1/2W Carbon	AA
⚠R711	95KUEEB100BEJ		10 1/4W Carbon	AA
	or			
	95KUEEB100BFJ		10 1/4W Carbon	AA
⚠R712	95KUEEB121BEJ		120 1/4W Carbon	AA
	or			
	95KUEEB121BFJ		120 1/4W Carbon	AA
⚠R713	95KUEEC471BEJ		470 1/2W Carbon	AA
	or			
	95KUEEC471ATJ		470 1/2W Carbon	AA
⚠R714	95KUEEB472BEJ		4.7k 1/4W Carbon	AA
	or			
	95KUEEB472BFJ		4.7k 1/4W Carbon	AA
⚠R715	95KUEEB154BEJ		150k1/4W Carbon	AA
	or			
	95KUEEB154BFJ		150k1/4W Carbon	AA
⚠R716	95KUEEB153BEJ		15k 1/4W Carbon	AA
	or			
	95KUEEB153BFJ		15k 1/4W Carbon	AA
⚠R717	95KUEEB562BEJ		5.6k 1/4W Carbon	AA
	or			
	95KUEEB562BFJ		5.6k 1/4W Carbon	AA
⚠R718	95KUEEB562BEJ		5.6k 1/4W Carbon	AA
	or			
	95KUEEB562BFJ		5.6k 1/4W Carbon	AA
⚠R719	95KUEEB562BEJ		5.6k 1/4W Carbon	AA
	or			
	95KUEEB562BFJ		5.6k 1/4W Carbon	AA
R720	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KuEEB102BFJ		1k 1/4W Carbon	AA

Ref. No.	Part No.	★	Description	Code

RDENC0057CEZZ
POWER UNIT (Continued)

RESISTORS (Continued)

R721	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R726	95KUEEB183BEJ		18k 1/4W Carbon	AA
	or			
	95KUEEB183BFJ		18k 1/4W Carbon	AA
R727	*See Controls*			
R728	95KUEEB472BEJ		4.7k 1/4W Carbon	AA
	or			
	95KUEEB472BFJ		4.7k 1/4W Carbon	AA
R729	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R730	95KUEEB221BEJ		220 1/4W Carbon	AA
	or			
	95KUEEB221BFJ		220 1/4W Carbon	AA
R735	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R736	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R737	95KUEBBR27AMJ		0.27 1/4W Fuse Resistor	A C
R738	95KUEEB182BEJ		1.8k 1/4W Carbon	AA
	or			
	95KUEEB182BFJ		1.8k 1/4W Carbon	AA
R739	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R740	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R741	95KUEEC151BE	J	150 1/2W Carbon	AA
	or			
	95KUEEC151ATJ		150 1/2W Carbon	AA
R742	95KUEEC151BE	J	150 1/2W Carbon	AA
	or			
	95KUEEC151ATJ		150 1/2W Carbon	AA
R744	95KUEEB332BEJ		3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA
R747	95KUEEB332BEJ		3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA
R748	95KUEEB332BEJ		3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA
R749	95KUEEB332BEJ		3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA

RESISTORS (Continued)

R750	95KUEEB562BEJ		5.6k 1/4W Carbon	AA
	or			
	95KUEEB562BFJ		5.6k 1/4W Carbon	AA
R752	95KUEEB332BEJ		3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA
R753	95KUEEB332BE	J	3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA
R754	95KUEEB182BEJ		1.8k 1/4W Carbon	AA
	or			
	95KUEEB182BFJ		1.8k 1/4W Carbon	AA
R755	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R757	95KUEEB332BEJ		3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA
R758	95KUEEB332BEJ		3.3k 1/4W Carbon	AA
	or			
	95KUEEB332BFJ		3.3k 1/4W Carbon	AA
⚠R759	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
⚠R760	95KUEEB151BE	J	150 1/4W Carbon	AA
	or			
	95KUEEB151BFJ		150 1/4W Carbon	AA
R761	95KUEEB102BEJ		1k 1/4W Carbon	AA
	or			
	95KUEEB102BFJ		1k 1/4W Carbon	AA
R762	95KUEBBR10ANJ		0.15 Fuse Resistor	AC

RELAY AND SWITCH

⚠RY701	95KPHZ0096ZZ	J	Power Relay, DG12D1-0(M)	AL
⚠SW701	QSW-P0566CEZZ	J	Power Switch, PFZ0226ZZ	A L

MISCELLANEOUS PARTS

⚠F701	95KPJCTG5001	J	Fuse, T5AH, 250V	AG
⚠F702	95KPJT0134ZZ	J	Thermal Cut-off, H125A	A D
FH701	95KPZZ0625ZZ	J	Fuse Holder	AA
CN1A	95KPKZ1057ZZ	J	Connector 5-pin	AC
CN1B	95KPCZ0086ZZ	J	Connector 5-pin	AC
CN2A	95KPKZ2525ZZ	J	Connector 7-pin	AC
CN2B	95KPEZ0047ZZ	J	Connector 7-pin	AD
EB	95KPKZ0527ZZ	J	Connector 7-pin	AB
EC	95KPKZ0527ZZ	J	Connector 7-pin	AB
PT	95KPKZ0194ZZ	J	Connector 2-pin	AC

End of POWER UNIT

Ref. No.	Part No.	★	Description	Code

RDENC0058CEZZ
BALLAST UNIT

INTEGRATED CIRCUITS

IC1701	95KUCZ01542Z	J	STR-D1005T	AP
⚠IC1702	95KUCH0100ZZ	J	M67170-03	BC

TRANSISTORS

⚠Q1701	95KUAG0062AZ	J	2SK1180	AS
4170	3 95KUAC0240CZ	J	2SC4297	AN
4170	4 95KUAC0240CZ	J	2SC4297	AN
Q1705	95KUAC0240CZ	J	2SC4297	AN
Q1706	95KUAC0240CZ	J	2SC4297	AN
4170	7 95KUAC0232AZ	J	2SC3631	AF
Q1708	95KUAG0048AZ	J	2SK1142	AM

DIODES

D1703	95KUBC0248AK	J	05NU42 TPA2	AC
D1704	95KUBB0191AZ	J	FMG-G36S	AM
D1706	95KUBC0070AL	J	ERA81-004V1	AD
0170	7 95KUBC0070AL	J	ERA81-004V1	AD
0170	8 95KUBC0204AZ	J	RU2YX	AD
D1709	95KUBC0165BK	J	ERA38-05V1	AD
0171	0 95KUBC0078DK	J	ERB44-06V1	AC
D1711	95KUBC0078DK	J	ERB44-06V1	AC
D1712	95KUBC0078DK	J	ERB44-06V1	AC
D1713	95KUBC0078DK	J	ERB44-06V1	AC
D1717	95KUBC0078DK	J	ERB44-06V1	AC
D1751	95KUBC0187AK	J	ERA91-02V1	AD
D1752	95KUBC0187AK	J	ERA91-02V1	AD
D1753	95KUBC0187AK	J	ERA91-02V1	AD
D1754	95KUBC0187AK	J	ERA91-02V1	AD
ZD1701	95KUBDAK160C	J	Zener Diode, RD16ESAB2-T4	AC
ZD1702	95KUBDAK120C	J	Zener Diode, RD12ESAB2-T4	AB
ZD1703	95KUBDAK200C	J	Zener Diode, RD20ESAB2-T4	AB

PHOTO COUPLER

⚠PC1701	95KUDC0065LZ	J	Photo Coupler, TLP634 (D4-GB)	AK

Ref. No.	Part No.	★	Description	Code

COILS AND TRANSFORMERS

⚠L1701	95KUKZ0344ZZ	J	Choke Coil, SN5-400	AH
L1703	95K12969501 2	J	Choke Coil, CHT056	AS
T1701	95K1 2961601 8	J	Transformer	AQ
⚠T1702	95K12969501 3	J	Transformer	AW
⚠T1704	95K12969501 6	J	Transformer	AW
⚠T1705	95K748695002	J	Transformer	BK

CONTROL

VR1701	95KUFBA203CD	J	20k(B)	AC

CAPACITORS

C1709	95KUGCU221AM	J	220p 1kV Ceramic	AC
C1710	95KUGFQ474CU	J	0.47 400V Film	AF
C1712	95KUGZ0805ZZ	J	3300p 500V Ceramic	AB
C1713	95KUGAD101HP	J	100 25V Electrolytic	AD
C1714	95KUGAD101HP	J	100 25V Electrolytic	AD
C1715	95KUGAF221EV	J	220 50V Electrolytic	AD
C1716	95KUGCU222BA	J	2200p Ceramic	AC
C1717	95KUGAD101HP	J	100 25V Electrolytic	AD
C1718	95KUGZ0798ZZ	J	10 25V Electrolytic	AC
C1719	95KUGZ0800ZZ	J	10 50V Electrolytic	AC
C1720	95KUGZ0799ZZ	J	1 50V Electrolytic	AC
C1721	95KUGFQ474CU	J	0.47 400V Film	AF
⚠C1724	95KUGFQ474CU	J	0.47 400V Film	A F
C1751	95KUGFQ333DU	J	3300p 400V Film	AC
C1752	95KUGFQ333DU	J	3300p 400V Film	AC
C1753	95KUGFQ333DU	J	3300p 400V Film	AC
C1754	95KUGFQ333DU	J	3300p 400V Film	AC
C1755	95KUGFF222BQ	J	2200p 50V Film	AB
C1756	95KUGZ0799ZZ	J	1 50V Electrolytic	AC
C1757	95KUGCF102BX	J	1000p Ceramic	AA
C1758	95KUGCZ221AB	J	220p 1kV Ceramic	AB
C1759	95KUGFF103BQ	J	0.01 Film	AB
C1760	95KUGCF102BX	J	1000p Ceramic	AA
SK1701	95KUGZ0805ZZ	J	3300p 500V Ceramic	A B

Ref. No.	Part No.	*	Description	Code

RDENC0058CEZZ
BALLAST UNIT (Continued)

RESISTORS

R1702	95KUEZ0449ZZJ	820 1W Metal	AB
R1703	95KUEFER33BJJ	0.33 1W Metal	AC
R1704	95KUEFD683BHJ	68k 1W Metal	AB
R1705	95KUEFD151BHJ	150 1W Metal	AB
R1706	95KUEFC220AVJ	22 1/2W Metal	A8
R1707	95KUEFD330BHJ	33 1W Metal	AB
R1708	95KUEFD2R7BH J	2.7 1W Metal	A8
R1709	95KUEEB330BEJ	33 Carbon	AA
	or		
	95KUEEB330BFJ	33 Carbon	AA
R1710	95KUEFD2R7BHJ	2.7 1W Metal	AB
R1711	95KUEEB330BEJ	33 Carbon	AA
	or		
	95KUEEB330BFJ	33 Carbon	AA
R1712	95KUEEB330BEJ	33 Carbon	AA
	or		
	95KUEEB330BFJ	33 Carbon	AA
R1713	95KUEFD2R7BHJ	2.7 1W Metal	AB
R1714	95KUEFE332AW J	3.3k 2W Metal	A8
R1715	95KUEEB330BE J	33 Carbon	AA
	or		
	95KUEEB330BF J	33 Carbon	AA
R1716	95KUEFD2R7BH J	2.7 1W Metal	AB
R1717	95KUEGGR15AT J	0.15 5W Cement	AE
R1718	95KUEFD2R2BHJ	2.2 1W Metal	A8
R1719	95KUEFD2R2BHJ	2.2 1W Metal	AB
R1720	95KUEFE332AW J	3.3k 2W Metal	AB
R1721	95KUEEC4R7BEJ	4.7 1/2W Carbon	A8
	or		
	95KUEEC4R7AMJ	4.7 1/2W Carbon	AA
R1723	95KUEEC121BEJ	120 1/2W Carbon	AA
	or		
	95KUEEC121AMJ	120 1/2W Carbon	AA
	or		
	95KUEEC121ATJ	120 1/2W Carbon	AA
R1724	95KUEEB102BEJ	1k 1/4W Carbon	AA
	or		
	95KUEEB102BFJ	1k 1/4W Carbon	AA
R1725	95KUEEB102BEJ	1k 1/4W Carbon	AA
	or		
	95KUEE81Q2BFJ	1k 1/4W Carbon	AA
⚠ R1726	95KUEBBR39AM J	0.39 1/4W Fuse Resistor A	C
⚠ R1727	95KUEBBR39AM J	0.39 1/4W Fuse Resistor A	C

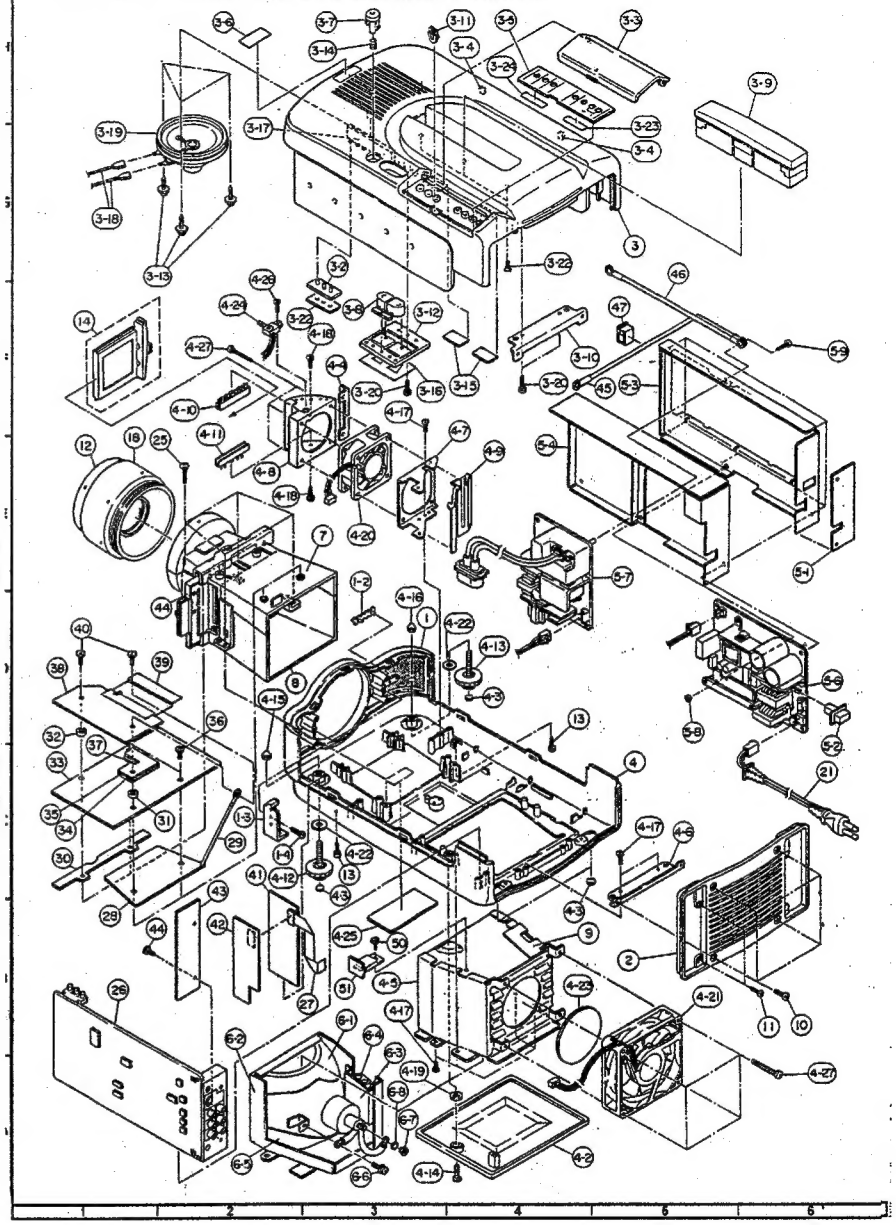
Ref. No.*	Part No.	Description	Code

MISCELLANEOUS PARTS

CN1	95KPKZ0522ZZ J	Connector 2-pin	A8
⚠ F1701	95KPJCBB1001 J	Protector, 1A, 125V A	E
⚠ F1702	95KPJT0136ZZ J	Tehrmal Cut-off, 2A, 250V, 136°C	AE
FB1701	95KBFZ89250Z J	Ferrite Bead	A8
FB1702	95KBFZ89250Z J	Ferrite Bead	AB
FB1703	95KBFZ89250Z J	Ferrite Bead	AB
FB1704	95KBFZ89250Z J	Ferrite Bead	A8
PL	95KPKZ0194ZZ J	Connector 2-pin	AC

End of BALLAST UNIT

CABINET AND MECHANICAL PARTS



CABINET AND MECHANICAL PARTS

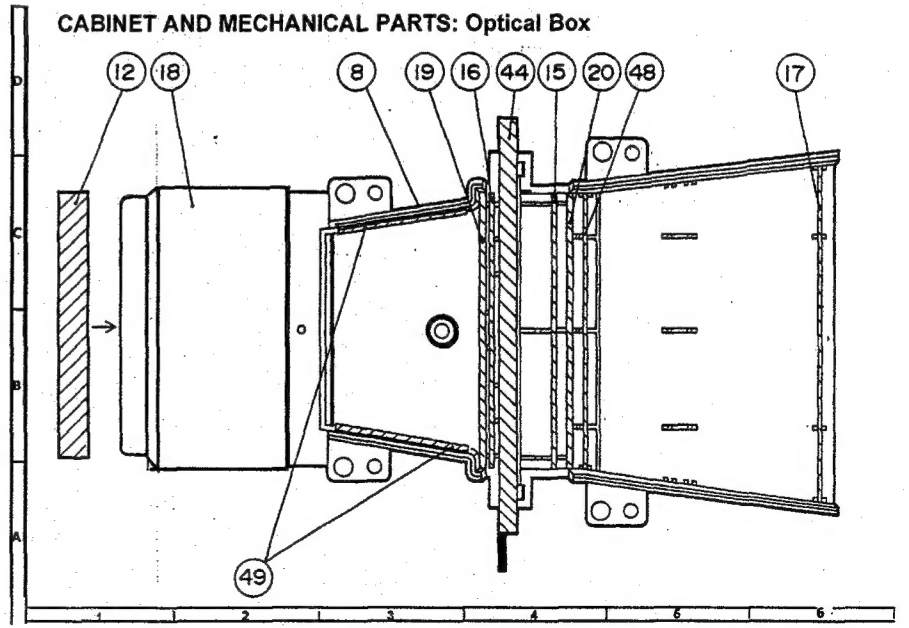
Ref. No.	Part No.	★	Description	Code
1	CBDYF1034CE01	J	Front Body Ass'y	AT
1-1	*Not Available*		– Front Body	—
1-2	HBDGB1007GESB	J	Badge "SHARP"	AD
1-3	LANGT9973CEFW	J	Angle, fix Front/Bottom Body	AD
1-4	XEBSD30P12000	J	Screw	AA
2	GBDYR1017CESA	J	Rear Body	AM
3	CBDYT101 1CE01	J	Top Body Ass'y	BG
3-1	*Not Available*		– Top Body	—
3-2	GCOVA1440CEZZ	J	LED Cover	AC
3-3	GDORT1065CEKA	J	Door, Top side	AH
3-4	GLEGG9025CESB	J	Leg Rubber	A8
3-5	HINDP4151CESA	J	Indication Plate, in Door	A F
3-6	HINDP4201CESA	J	Indication Plate, Note	A8
3-7	JBTN-1768CESA	J	Button, Power	AE
3-8	JBTN-1779CESA	J	Button, Vol-Up/Down	AE
3-9	JHNDA1023CESA	J	Handle	AW
3-10	LANGT2051CEFW	J	Angle	AD
3-11	LHLDS1010GEZZ	J	Door Catch	AA
3-12	LHLDZ1701CEZZ	J	Button, Holder	AC
3-13	LX-HZ3066CEFF	J	Screw, Speaker	AA
3-14	MSPRC0148CEFW	J	Spring, Power Button	AA
3-15	PCOVH1028CEZZ	J	Light Shielding Cover	AA
3-16	PCOVZ1007CEZZ	J	Light Shielding Cover, for Button	AC
3-17	PMLT-0178CE00	J	Moltprene	AB
3-18	QCNW-3466CEZZ	J	Connecting Wire, Speaker	AE
3-19	VSP0080P-G7WA	J	Speaker	AP
3-20	XEBSD30P10000	J	Screw	AA
3-21	XESSF30P10000	J	Screw, fix Handle	AA
3-22	PCOVU1029CEZZ	J	LED Light Shielding Cover	AC
3-23	PSPAH0421CEZZ	J	Himelon	AB
3-24	PSPAH0422CEZZ	J	Himelon	AB
4	CBDYU101 1CE02	J	Bottom Body Ass'y	BN
4-1	*Not Available*		– Bottom Body	—
4-2	GDORU1002CESA	J	Door, Bottom Side	AH
4-3	GLEGG9027CESB	J	Leg, Rubber	AB
4-4	LANGF9433CEFW	J	Guide Angle	AC
4-5	LANGQ9131CEFW	J	Tape Guide Angle	AQ
4-6	LANGT205 1 CEFW	J	Angle	AD
4-7	LANGT9952CEFW	J	Angle, Fan	A E
4-8	LANGT9992CEFW	J	Duct Angle	AE
4-9	LHLDZ1698CEZZ	J	Duct Holder	A C
4-10	LHLDZ9118CEZZ	J	Rail Holder-Top	AC
4-11	LHLDZ9119CEZZ	J	Rail Holder-Bottom	AC
4-12	LX-BZ1003CESA	J	Adjuster-R	AC
4-13	LX-BZ1004CESA	J	Adjuster-L	AE
4-14	LX-BZ3274CESA	J	Screw, fix Lamp Case	AE
4-15	LX-NZ3095CEFD	J	Nut-R	AA
4-16	LX-NZ3123CEFE	J	Nut-L	AB
4-17	XEBSD30P10000	J	Screw	AA
4-18	XEPSF30P06000	J	Screw	AA
4-19	XRESJ30-06000	J	E-Ring	AA
4-20	NFANR0039CE00	J	Fan-A	AY
4-21	NFANR0040CE00	J	Fan-B	Ax
4-22	PSPAH0393CE00	J	Spacer	AA
4-23	PZETK0006CEZZ	J	Shielding Plate	AD
⚠ 4-24	QCNW-3329CEZZ	J	Wire, Leaf Switch	AM
4-25	TLABM3434CEZZ	J	Model Label	AG
4-26	XBPSF26P06000	J	Screw	AA
4-27	XBPSF40P30000	J	Screw, fix Fan	AA
5	*Not Available*		– Power/Ballast Unit Ass'y	—
5-1	HINDP4111CESA	J	Indication Plate	AC
5-2	JKNBP1065CESB	J	Button	AC
5-3	LANGQ9132CEFW	J	Angle	AP
5-4	PZETV0562CEZZ	J	Shielding Plate	AT
5-5	QCNW-3419CEZZ	J	Wire	AC
5-6	*Not Available*		– Power Unit	—
5-7	*Not Available*		– Ballast Unit	—
5-8	XNESD30-24000	J	Nut	AA
5-9	XTASD30P12000	J	Screw	AA
6	BQC-XV310P//1	J	Lamp Unit	
⚠ 6-1	RLMPF0012CEZZ	J	Lamp	CD
6-2	LANGT9948CEFW	J	Case	AS
6-3	LANGH0104CEFW	J	Light Shielding Cover	A C
6-4	QPLGN0295CEZZ	J	Plug	AR
6-5	MSPRB0015CEFW	J	Spring	AF
6-6	LX-BZ3270CEFN	J	Screw	AA
6-7	LX-NZ3108CEFN	J	Nut	AA
6-8	LX-WZ31 02CEFN	J	Washer	AA
7	GBOXZ1007CEZZ	J	Optical Box, Top	AR
8	GBOXZ1008CEZZ	J	Optical Box, Bottom	A T
9	LANGH0103CEFW	J	Light Shielding Plate	A C
10	LX-BZ3279CESA	J	Deco. Screw-A	AA
11	LX-HZ3067CESA	J	Deco. Screw-B	A A
12	PCAPH1013CEZZ	J	Lens Cap	At
13	XTPSD30P16000	J	Screw	AA
14	PFILD0018CEZZ	J	Filter (up to *September 1992*)	AM
14	PFILD0022CEZZ	J	Filter (*October 1992*~)	AM
15	PFILW0041CE01	J	Filter, In H (with Glass)	A Y
16	PFILW0042CE01	J	Filter, Out H (with Glass)	A Y
17	PFILW0054CEZZ	J	UV/IR Cut Filter	BN
18	PLNS-0032CESA	J	Projection Lens	BR
19	PLNS-0033CEZZ	J	Furenel Lens	AT
20	PLNS-0037CEZZ	J	Lens	AQ
⚠ 21	QACCV2009CESA	J	AC Cord	AN
22	XEBSD30P08000	J	Screw	AA

CABINET AND MECHANICAL PARTS (Continued)

Ref. No.	Part No.	★	Description	Code
23	XEBSD30P12000	J	Screw	AA
24	XEBSD30P16000	J	Screw	AA
25	XTASD40P16000	J	Screw	AA
26	*Not Available*		– Main Unit	—
27	QCNW-3434CEZZ	J	Panel Wire	AF
28	PSLDM4079CEZZ	J	Shield Panel-A	
29	QCNW-3446CEZZ	J	Shield Wire	AB
30	PZETV0567CEZZ	J	Airflow Vane	AC
31	PSPAB0022CEFW	J	Spacer-A	AC
32	PSPAB0023CEFW	J	Spacer-B	AC
33	*Not Available*		– Digital Unit	—
34	PRDAR1457CEFW	J	Radiator Panel-Top	
35	PRDAR1456CEFW	J	Radiator Panel-Bottom	
36	XEBSD30P08000	J	Screw	AA
37	PGUMS0008CEZZZ	J	Plate, Rubber	
38	PRDAR1458CEFW	J	Radiator Panel-B	
39	PSLDM4080CEZZ	J	Shield Panel-B	
40	XEBSD30P16000	J	Screw	AA
41	*Not Available*		– Sub Unit	—
42	PCOVP1059CE00	J	Wire Cover	
43	PSPAV0126CEZZ	J	Light Shielding Plate	AB
44	RUNTK0353CEZZ	J	LCD Module	**
45	QCNW-3457CEZZ	J	Wire	
46	QCNW-3419CEZZ	J	Wire	AC
47	LHLDW1173CEZZ	J	Wire Holder	AD
48	PGLS-0006CEZZ	J	Glass	
49	PCOVU1031CEZZ	J	Light Shielding Plate	
50	LX-BZ3220CEFD	J	Screw	AA
51	*Not Available*		– Bimetal Unit	—

— End of CABINET AND MECHANICAL PARTS —

CABINET AND MECHANICAL PARTS: Optical Box



Ref. No.	Part No.	*	Description	Code

PACKING PARTS
(NOT REPLACEMENT ITEM)

	SPAKC4462CEZZ	–	Packing Case —
	SPAKX2373CEZZ	–	Buffer Material (Top and Bottom) —
	TLABK0001TAZZ	–	Number Card —
	TLABN0029CEZZ	–	Serial Number Label —

—— End of PACKING PARTS ——

Ref. No.	Part No.	•	Description	Code

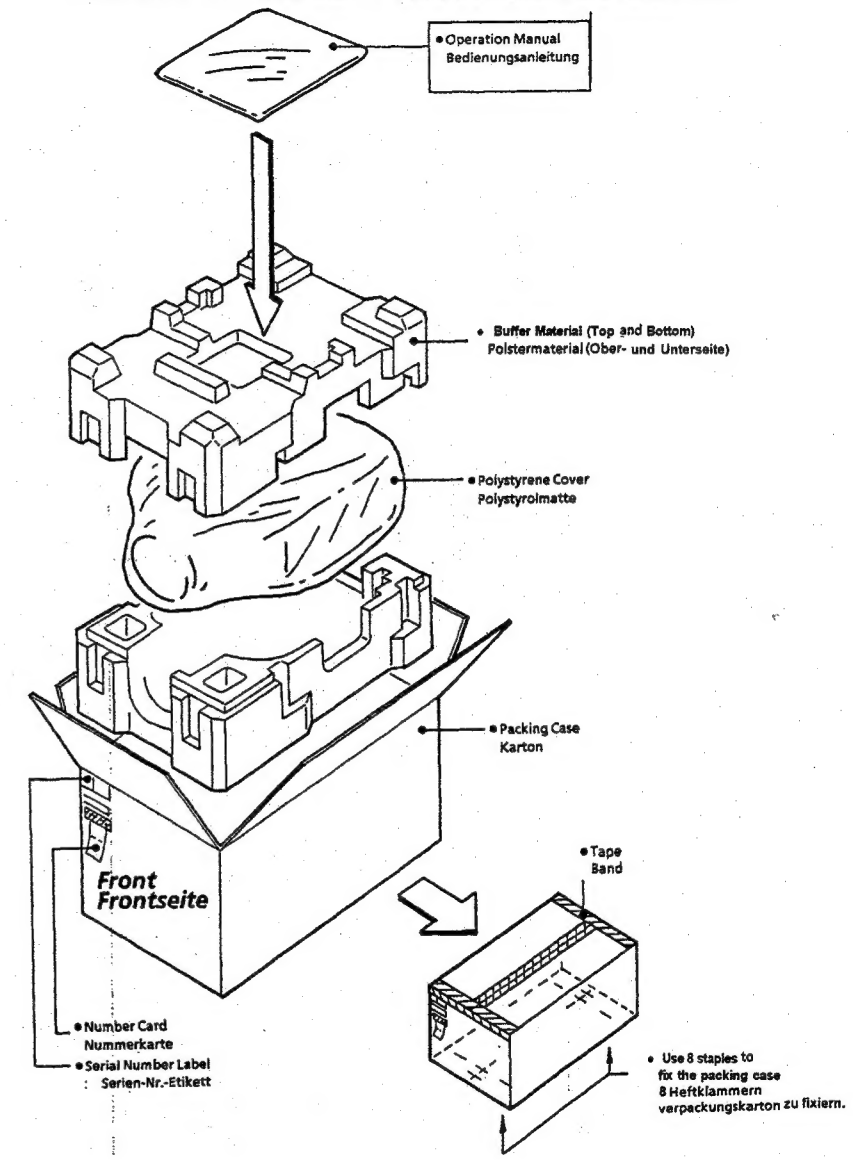
SUPPLIED ACCESSORIES

ACCESSORIES

12	PCAPH1013CESA	J	Lens Cap (installed)	AG
14	PFILD0018CEZZ	J	Filter (installed) (up to September 1992)	AM
14	PFILD0022CEZZ	J	Filter (installed) (October 1992~)	AM

ACCESSORIES *(NOT REPLACEMENT ITEM)*

	TINS-4969CEZZ	–	Operation Manual —

—— End of ACCESSORIES ——

PACKING OF THE SET / VERPACKEN DES GERÄTS